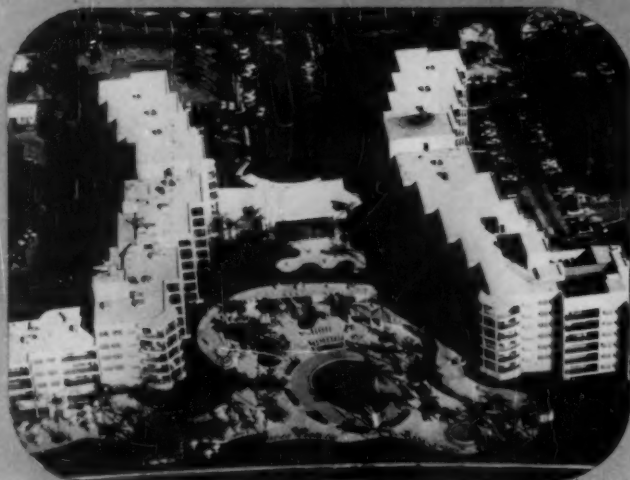


ARCHITECTURAL RECORD



JULY 1957

BUILDING TYPES STUDY 248 : SCHOOLS



Palm Beach Towers Hotel, Palm Beach, Fla.; Arch.—John Hans Graham & Assocs., Washington, D. C.; Struc. Engr.—Oboler & Clarke, Miami; Constlg. Engr.—Norman C. Schmid & Assocs. Palm Beach; G. C.—Taylor Construction Co., Miami; Pozzolith Ready-Mixed concrete—Burnup & Sims, and Rinker Materials, West Palm Beach.



Thunderbird Motel, Miami Beach, Fla.; Arch.—Norman Giller & Assocs., Miami Beach; Contr.—Taylor Construction Co., Miami; Engr.—Jules Channing, Miami; Pozzolith Ready-Mixed concrete—Maule Industries, Inc. & Acme Concrete Corp.

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Americana Hotel, Bal Harbor, Miami Beach, Fla.; Arch.—Morris Lapidus, Miami Beach; Engr.—Oboler & Clarke, Miami Beach; G. C.—Taylor Construction Co., Miami; Pozzolith Ready-Mixed concrete—Maule Industries, Inc.

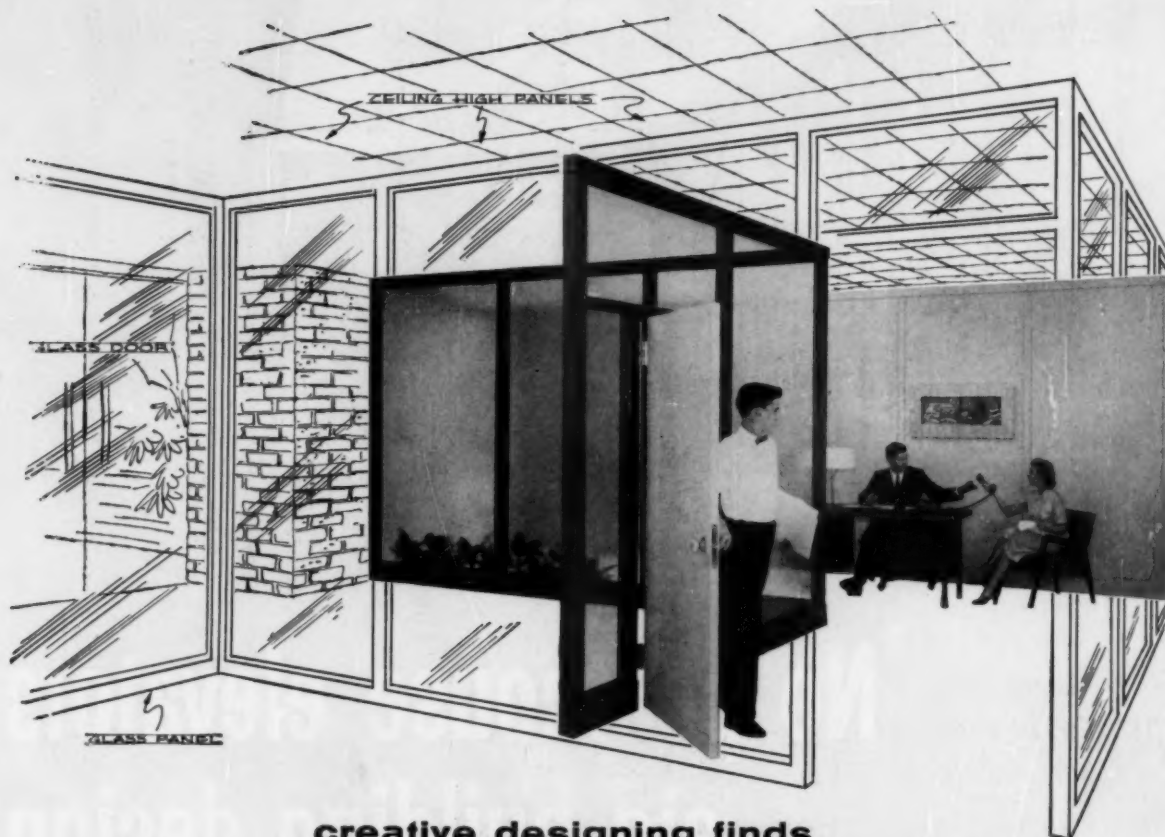


Eden Rec Hotel, Miami Beach, Fla.; Arch.—Morris Lapidus, Miami Beach; Engr.—H. J. Ross Assocs., Miami; G. C.—Taylor Construction Co., Miami; Pozzolith Ready-Mixed concrete—Maule Industries, Inc.



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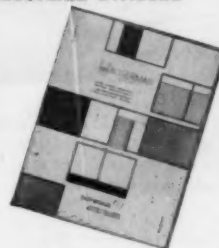
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IBM Regional Office Building, River Forest, Ill.
ARCHITECTS: Camburas & Theodore
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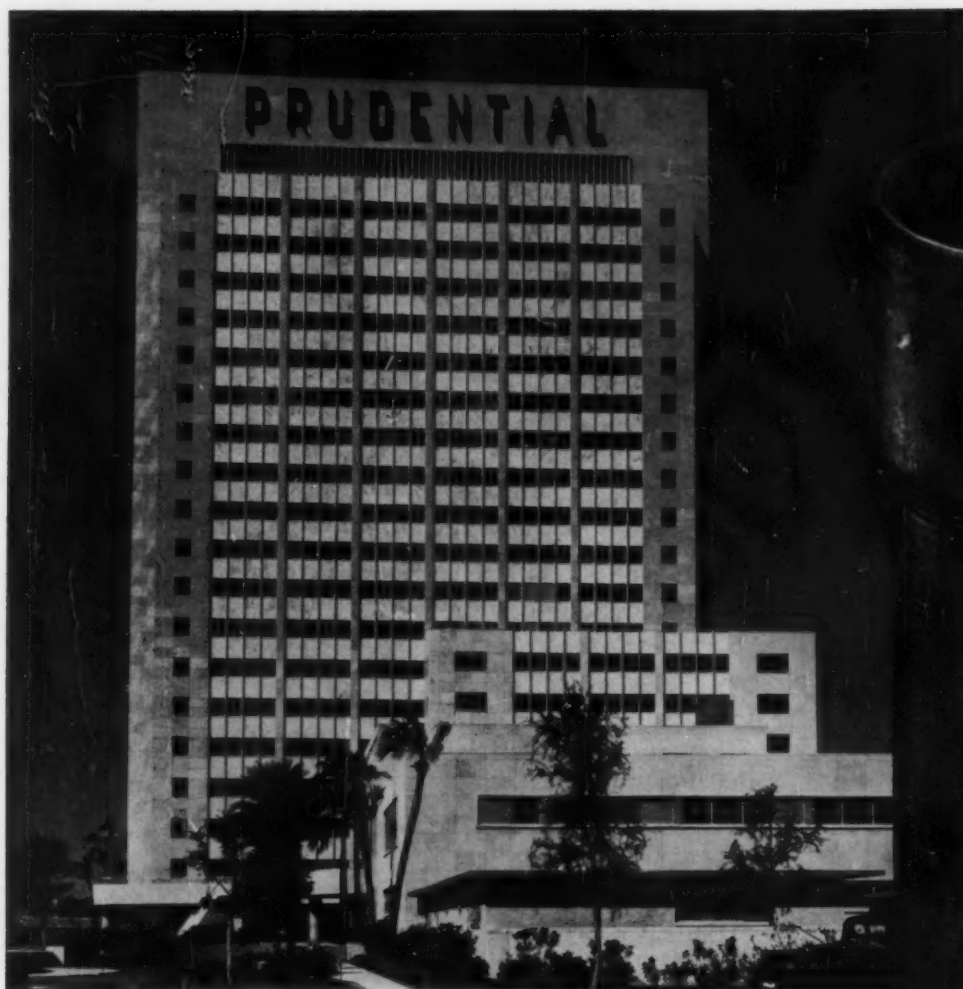
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ARCHITECTURAL RECORD

July 1957 Vol. 122 No. 1

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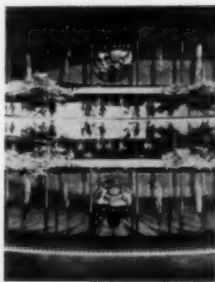


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The American Pavilion, Brussels World's Fair; Edward D. Stone, Architect; Louis Cheekman photo

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A New Eloquence for Architecture

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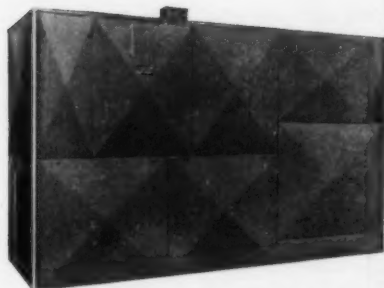
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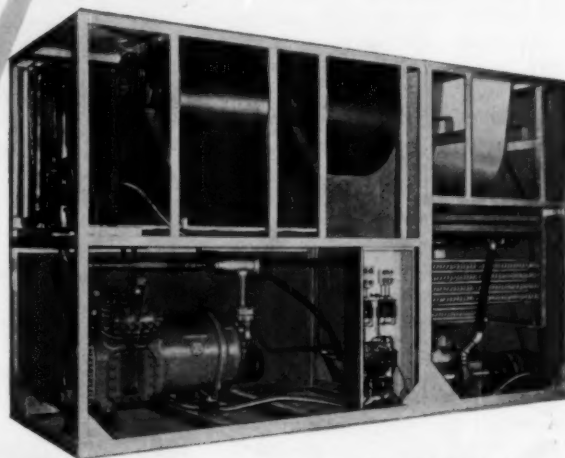
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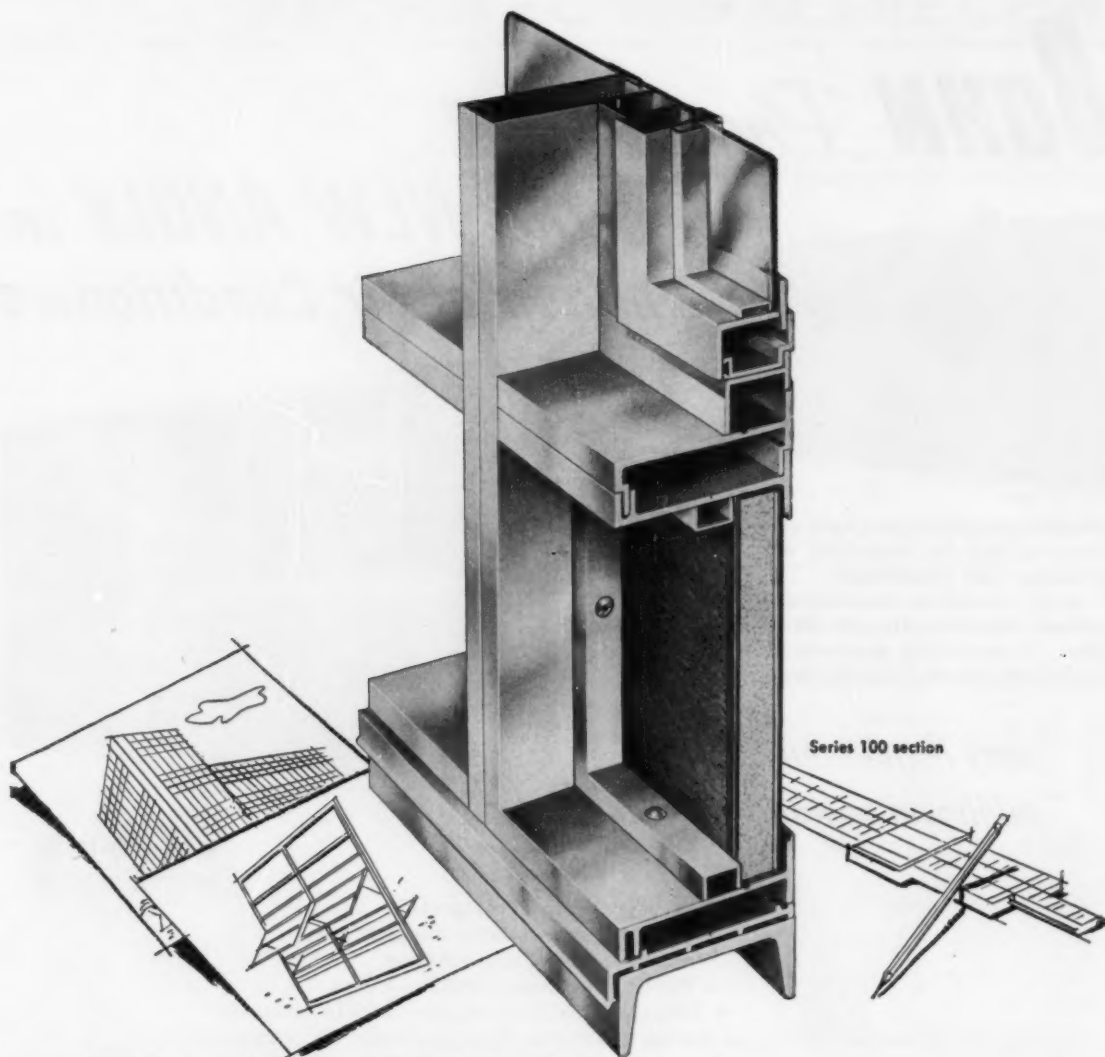
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THE RECORD REPORTS

P E R S P E C T I V E S

MACHINE-MADE AMERICA, that perpetual object of Old-World alarms, got only the most rapturous admiration from the three young Spanish architects who won the \$25,000 first annual R. S. Reynolds Memorial Award, received it at the A.I.A. Centennial Convention in May, and then promptly set out to spend as much of it as possible on a month's trip around the U. S. Back in New York briefly last month just before their return to Madrid, Señors Cesar Ortiz-Echagüe, Manuel Barbero Rebollo and Rafael de la Joya could not, in fact, say enough about those wonderful American machines. "Your machines, they work!" was a marvelous fact — in Spain, as Señor de la Joya put it, "when we make the machine, we make also the sign which say 'out of order'." They seem to have eaten about half their meals in cafeterias, for the pure joy of operating the vending machines. And *everything* was on their side, because the one machine they encountered which *was* out of order, though withholding food, spewed forth instead some twelve dollars in change. As architectural pilgrims they went to Chicago to see Mies' I.I.T. buildings and the Lake Shore Drive apartments, to Detroit to see Saarinen's General Motors Technical Center, to Wright's Falling Water as Edgar Kaufman's guests, to Cambridge to see Gropius' Harvard Graduate Center, Aalto's dormitory and Saarinen's auditorium and chapel at M.I.T. They were impressed, in varying degrees, with all of these. "But here what does architecture make? Here *everything* wonderful!" Rare and kindly visitors, who see the forest better than the trees.

A HOUSE IS NOT A HOME: An evocative little architectural tale is told in a recent issue of *The Italian Scene*, a monthly bulletin gotten out by the Cultural Division of the Italian Embassy. "Trulli-Land Snag," the item is headed, and it tells about the recent effort of a well-meaning agency to replace old trulli with new trulli — with the intent, in fact, of preserving the older trulli as museum pieces.

Trulli, you must know, are the traditional dwelling places of the hill people of a certain section of the heel of Italy: "a trullo," to quote *The Italian Scene*, "is a single circular chamber roofed with the large stone slabs found in the region. These are placed, with a special technique, so that each slab gently slants down and outward. They all converge, like an African ant hill, in a high peaked summit. . . . No rafters, no mortar are used. . . . A large house may consist of five, seven or more trulli, touching each other and joined by communicating doorways. . . ." Some of the trulli still inhabited are centuries old. Well, the Cassa del Mezzogiorno has recently financed the building of a whole set of brand new trulli in Alberobello, the little town which is the "capital" of Trulli-Land. "But, with the completion of the work, an unforeseen snag has arisen: the owners of the trulli flatly refuse to exchange the old for the new. The new trulli may be roomier, but they like what they have got. If they move at all, it will be to a modern apartment." At last report, Cassa del Mezzogiorno was considering the possibility of turning the new trulli into motels for tourists.

ARCHITECTURE FOR A FREE PEOPLE: "What we can hope to do," said August Heckscher at the Centennial Dinner of the New York Chapter of the American Institute of Architects, "is through architecture and design to cause men to think through the premises by which they live; to make articulate, and finally to make massive and visible, the underlying conscience of the age. . . . The architect cannot dictate to his client; he certainly would be unwise to try to dictate to the community. The process of evoking buried strains of belief and value, of constantly reshaping the outward design so as to avoid doing violence to the inner life, is the essence of democracy. It is my own belief, indeed, that an age of great building can be an age of true freedom — that the next stage of liberalism in America will be the liberalism born of common efforts to manifest

in architectural forms the quality of life which the people treasures for its own. The architect will have to be infinitely patient; he will have to listen for those signs and voices that are not yet in the fashion, heed those impulses which are just breaking into the light, all the while maintaining his convictions and his own clear sense of taste and style. We shall then have beauty, but not personal beauty merely, not beauty in the abstract: beauty, rather, that springs from the strivings of a self-confident and diverse people, from their life together, their dreams and needs and hopes. The gravest question, I suggest, is whether the architect will have the time to know what is happening around him; whether he will be able to exercise the imagination, the piercing kind of imagination, which sees what is really going on, instead of merely seeing the thing that everyone says is going on. . . . Go out, I would urge you, and gain touch anew with the people whose interpreter and servant you are — with the American land, with the forces of change that run across the continent and are making us over in ways we only dimly apprehend. Stand where you have perspective; test all your art against the needs of the new day that shines around us."

THE FUTURE OF THE CITY (postscript on the A.I.A. convention seminar): "Many of us in the planning professions," writes Landscape Architect John O. Simonds of Washington, D. C., "have long sought that agonizingly elusive holy grail of planning, which is no more, nor any less, than a lucid and compelling concept of planning's main business. In Washington's Constitution Hall during the A.I.A. convention, we heard this concept spelled out with ringing clarity. Those attending had the great good fortune to hear the story of planning told with more heart, and mind, and soul, and muscle, than we have ever heard it told before. Congratulations and sincere thanks to panelists Clark, Feiss and Talbott and to John Knox Shear for his able chairmanship of the panel on 'The Future of the City.'"

89 AMERICAN SCHOOLS BY 79 ARCHITECTS SELECTED TO SHOW

School buildings will be the major subject of the Twentieth International Conference on Public Education to be held this month (July 8-17) in Geneva. Some 70 countries are expected to participate. The United States exhibit, arranged by Dr. Ray L. Hamon, chief of the School Housing Section of the U. S. Office of Education, will consist of individual brochures including photographs, miniature drawings and explanatory notes on each of 89 recently constructed American school buildings from 79 architectural offices. In addition, eight of these projects (shown on these pages) will be exhibited also on meter-square mounts showing the principal features.

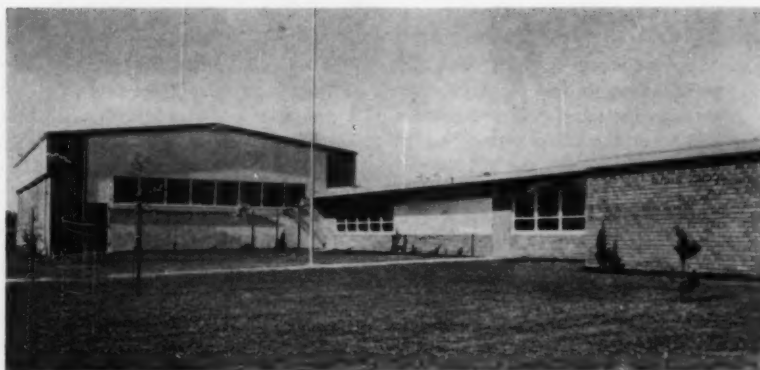
Following is a complete list of the architects whose work is represented:

Clark R. Ackley, Lansing, Mich.; Elmer H. Adams, Reading, Pa.; Warren H. Ashley, West Hartford, Conn.; Joseph Baker and Associates, Newark, Ohio; H. E. Beyster and Associates, Detroit; Guido A. Blada and Associates, Battle Creek; Everett I. Brown Co., Indianapolis; Buchart Engineering Corp., York, Pa.; Ralph Burkhard, Seattle; Cannon, Smith and Gustavson, Salt Lake City; Caudill, Rowlett, Scott and Associates, Bryan, Tex.; Childs and Smith, Chicago; Coffin and Coffin, New York; Cowan and Paddock, Yakima, Wash.; Cox, Hagman and Meyer, Los Angeles.

Daniel, Mann, Johnson and Mendenhall, Los Angeles; Dorsta and Pantazi, Indianapolis; Wilmet C. Douglas, Birmingham, Ala.; Louis J. Drokes, West Hartford; Edwards and Portman, Atlanta; Ellerbe Co., St. Paul; Epple and Seaman, Newark; Finney, Dodson, Smeatie, Orrick and Associates, Baltimore; Howard T. Fisher and Associates, Chicago; Fletcher Thompson Inc., Bridgeport; Flewelling and Moody, Los Angeles; Freeland and Bird, San Diego.

Samuel Glaser, Boston; Edmund George Good Jr., Harrisburg; Haag and D'Entremont, Jenkintown, Pa.; Donald F. Haines, San Jose; Harbeson, Hough, Livingston and Larson, Philadelphia; Helmut, Obata and Kassabaum, St. Louis; Warren Holmes Company, Lansing, Mich.; Matt E. Howard and Associates, Houston; Hunter, Campbell and Rea, Altoona; William B. Ittner, St. Louis; Charles D. James, Madera, Cal.; Paul H. Kea Associates, Hyattsville, Md.; Kelly and Gruzen, New York; Louis C. Kingscott and Associates, Kalamazoo, Mich.; A. M. Kinney Associates, Cincinnati; Kistner, Wright and Wright, Los Angeles; Vincent G. Kiling, Philadelphia; Kuehne, Brooks and Barr, Austin.

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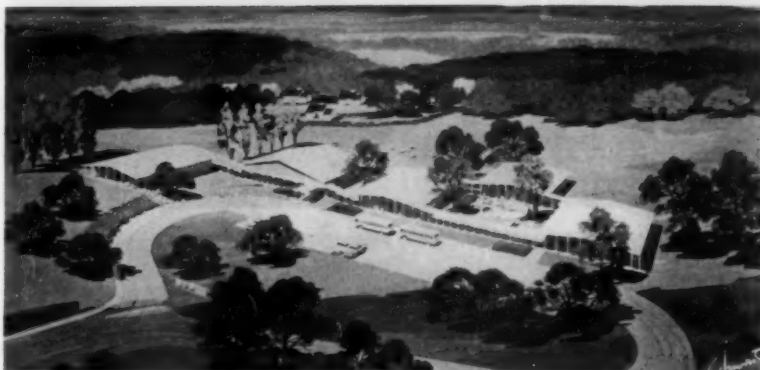
IN INTERNATIONAL SCHOOL BUILDING EXHIBITION AT GENEVA

Left: Faylane Elementary School, Garden Grove, Cal.; Kistner, Wright and Wright



Right: Midway Road Elementary School, DeKalb County, Ga.; Edwards and Portman

Left: Aviation High School, Redondo Beach, Cal.; Flewelling and Moody



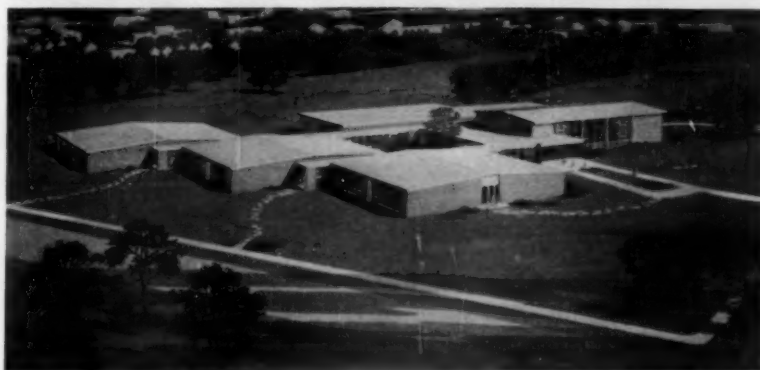
Right: Francis Dunlavy Elementary School, Lebanon, Ohio; Joseph Baker and Associates

Left: Fred Ekstrand Elementary School, San Dimas, Cal.; Daniel, Mann, Johnson and Mendenhall



Right: Brockway Junior-Senior High School, Jefferson County, Pa.; Hunter, Campbell and Rea

Left: North Hagerstown High School, Washington County, Md.; McLeod and Ferrara



Right: Beach Avenue Elementary School, Niagara Falls, N. Y.; Sargent-Webster-Crenshaw & Folley

(More news on page 12)

THE RECORD REPORTS

(Continued from page 11)

BUILDINGS IN THE NEWS

HAWAII CHAPTER BESTOWS ANNUAL HONOR AWARDS

HONOR AWARDS: at its annual dinner, the Hawaii chapter of the American Institute of Architects awarded three firsts and five honorable mentions in its annual honor awards program. Included among the first place winners were: (1) the Puna-

hou School Building — Vladimir Ossipoff, F.A.I.A., architect; (2) Hilo Public Library, Hilo — Merrill, Simms and Roehrig, architects; and (3) the Allen Johnson residence — Johnson and Perkins, architects



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HONORABLE MENTIONS: runners-up in the program included (4) the Glen Baker residence — Johnson and Perkins, architects; (5) the William Barlow residence — Harry Seckel, architect; (6) Kamehameha School Buildings — Merrill, Simms and Roehrig, architects; (7) Waikiki Kapahulu Library, Honolulu — Lemmon, Freeth, Haines and Jones, architects; and (8) Honolulu Junior Chamber of Commerce Building — Frank Haines and Gordon Bailey, architects. Serving on the jury, which was composed of 1956 award winners, were George J. Wimberley as chairman, Frank Slavsky and Alfred Preis, all of the Hawaii chapter (More news on page 16)

These are important problems! DO YOU KNOW THE ANSWERS?



Alexander Schwartz,
writer and lecturer on heat flow,
vapor flow, and condensation.

1. Does **BRONZE** or **ALUMINUM** paint on an **IRON** radiator improve or impair its performance? (19, 20, 22)
2. Will **ORDINARY** paint on an **IRON** radiator improve or impair its performance? (19, 20, 22)
3. Is it true that **ICE** radiates heat at a greater rate than a stove? (17, 18, 22)
4. What is **-k** factor? **C** factor? **Btu**? **U** factor? **R** factor? (17)
5. Is it true that the loss of each lb. of vapor represents a heat loss of 1060 Btu's, or **TEN TIMES** that which raises the temperature of 1 lb. of water 100°F? (5)
6. Does insulation **KEEP OUT THE COLD**? (17, 3)
7. Do thermal insulations create heat? (3)
8. Is it desirable to place vapor barriers on both sides of an insulation? (5)
9. Is it true that cold does not flow to warm, but heat to cold? (17, 18, 19)

Some of the answers may surprise you! Look them up in a handy, *new* reference manual, "Heat Flow by Radiation in Buildings," by Alexander Schwartz. You may obtain the booklet *free*!

The numbers above refer to pages in this *important contribution* on the theory and practice of insulating against heat and vapor flow, and against destructive condensation. It is replete with simple, illustrated explanations of how to solve many usual and unusual heat flow and fuel problems; also illustrates many new installation techniques.

The author is a well-known lecturer in the field of heat and vapor flow, and thermal insulation. He is president of Infra Insulation, Inc. and author of "Simplified Physics of Vapor and Thermal Insulation," which has been used for years as a text in universities, technological institutes and colleges, and as a valuable reference by architects, engineers, and builders.

In this one handy booklet of 48 pages are assembled and presented in clear, concise, easy-to-follow language: — facts; figures; reports of practical experiments and scientific theories obtainable otherwise only through years of study and consultation of hundreds of books and other publications. It is generously illustrated with drawings, photographs, diagrams, charts.

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and get the "answers"!



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QUIET DIGNITY

Much of the serene beauty and reverent atmosphere of the new sanctuary of the First Methodist Church, Midland, Michigan, is due to the floor of Armstrong Cork Tile. Beyond the appearance and underfoot quietness that were the prime reasons this floor was specified, its ease of maintenance is a plus factor. According to the church's caretaker, Armstrong Cork Tile is easy to clean and requires waxing only occasionally.

First Methodist Church, Midland, Michigan
architect: Alden B. Dow, F.A.I.A.

ARCHITECTS' OFFICE . . .

the flooring spec: Armstrong Cork Tile

MODERN TEXTURE

For their new offices, The Griffith Co., Architects, chose 6" x 12" Armstrong Cork Tile. Its rich, large-particle texture is an ideal complement to the dominant wood tones of the interior. A distinctive effect in perfect harmony with the interesting modern lines of the office was achieved with the use of the oblong tiles.

Offices of The Griffith Co., Architects,
Fort Dodge, Iowa
architect: Stanford Griffith

NATURAL BEAUTY

The rugged character of the sportsman's world is reflected in the New York showroom of one of America's largest makers of sportswear. To achieve an outdoor effect, important to the merchandising of the company's products, the architect specified sandblasted pine and flagstone—and a floor of Armstrong Cork Tile.

White Stag Manufacturing Company Showrooms,
New York City
architect: Gerhard E. Karplus, A.I.A.



Armstrong Cork Tile, a floor of classic beauty, is made with unusually large cork particles for a rich, deep-textured effect. It is exceedingly comfortable and quiet underfoot. A new plastic finish resists scuffing and simplifies maintenance. Armstrong Cork Tile is made in two shades, a variety of sizes, and four gauges: $\frac{3}{32}$ ", $\frac{1}{8}$ ", $\frac{3}{16}$ ", and $\frac{5}{16}$ ". It may be used over suspended floors or on grade when installed according to Armstrong specifications.

Armstrong makes all types of resilient floors; therefore, unbiased recommendations can be made for every flooring need. For information, samples, complete specifications, design and color scheme assistance, call the Architectural-Builder Consultant in your nearest Armstrong District Office or write direct to Armstrong Cork Company, Floor Division, 807 Rock Street, Lancaster, Pennsylvania.



Armstrong FLOORS

Approximate Installed Prices per Sq. Ft. (Over concrete, minimum area 1000 sq. ft.)

Decoray® Linoleum Tile Asphalt Tile, $\frac{1}{8}$ " (A, B, C, D) Linoleum, light gauge Asphalt Tile, $\frac{3}{16}$ " (A, B)	28¢ to 35¢	Linoleum, standard gauge Asphalt Tile, $\frac{3}{16}$ " (C, D) Linoleum, $\frac{1}{8}$ " ("Battleship") Greaseproof Asphalt Tile Cork Tile, $\frac{3}{32}$ "	35¢ to 45¢	Corlon® (Sheet Vinyl) Linoleum, $\frac{1}{8}$ " Cork Tile, $\frac{1}{8}$ " Excelon® Tile (Vinyl-Asbestos) $\frac{1}{8}$ "	45¢ to 60¢	Rubber Tile, $\frac{1}{8}$ " Cork Tile, $\frac{3}{16}$ " Linoleum, Linoleum (Hydrocord® Back) Linoleum (Cushion-Eze® Back)**	50¢ to 70¢	Custom Corlon Tile (Homogeneous Vinyl) $\frac{3}{32}$ ", $\frac{1}{8}$ " Cork Tile, $\frac{5}{16}$ " Rubber Tile, $\frac{3}{16}$ " Corlon (Cushion-Eze Back)	70¢ to 90¢	Custom Vinyl Cork Tile Imperial® Custom Corlon Tile	95¢ to \$1.30
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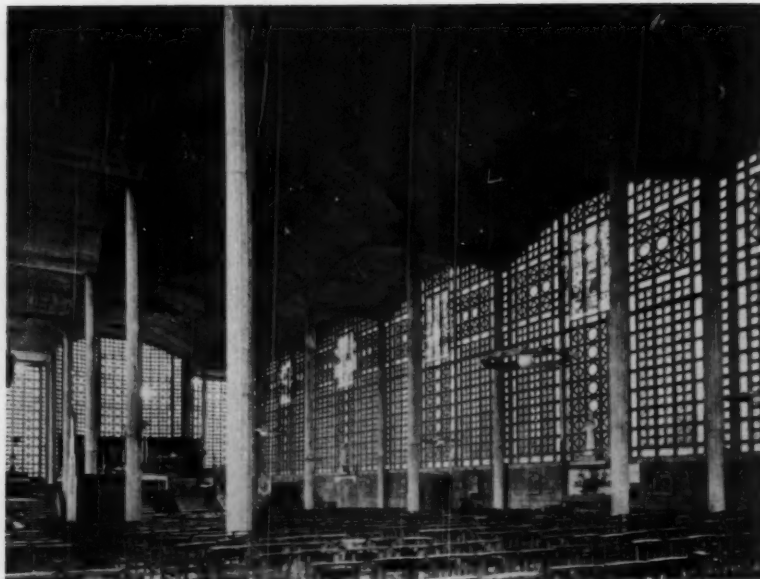
*TRADE-MARK
**PATENT PENDING

THE RECORD REPORTS

(Continued from page 12)



Left: Church of St. Engelbert, Köln-Riehl, 1932; Domenikus Böhm, architect — "if St. Engelbert," says the museum's catalog, "manifests 'tradition' [in] the apparent



complexity of its ribs and their 'Gothic' rise . . . the drama of the interior is contemporary." Right: Notre Dame du Raincy, Paris, 1923; Auguste Perrel,

architect — "the classical elements are present, yet throughout the effect is of reinforced concrete, brilliantly engineered for a space as Perrel understood it"

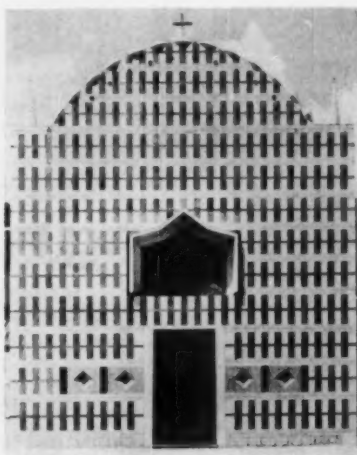
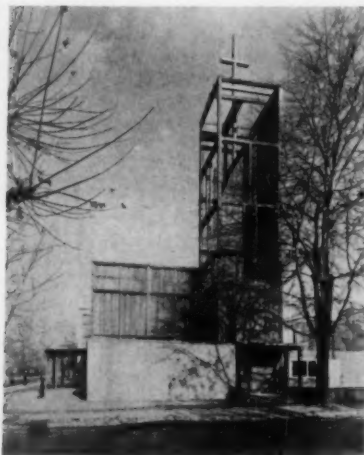
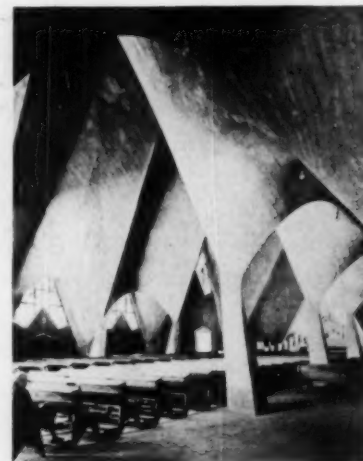
DEVELOPMENT OF MODERN CHURCH TRACED IN EXHIBIT

Under the auspices of its Department of Circulating Exhibitions, the Museum of Modern Art opened its new exhibit, "Modern Church Architecture," May 5 at the University of Illinois. This is the first exhibit on religious buildings to be organized by the department.

The exhibit shows 24 modern churches, ranging in time from Anatole de Baudot's Church of St. Jean de Montmartre, built in 1894, to Frank Lloyd Wright's Beth Shalom Synagogue, still under construction in Philadelphia. Ten U. S. churches are included

(Continued on page 356)

Right: Church of the Miraculous Virgin, Mexico, 1956; Felix Candela, architect — "the rhythm of shapes and the forms acting within them generate new architectural experiences in space." Below, left: Central Lutheran Church, Portland, Ore., 1951; Pietro Belluschi, architect — "sensitively balanced throughout." Below, center: Church of St. Anthony, Recoaro-Terme, Italy, 1950; Giuseppe Vacarro, architect — "façade of red and colored inlaid marble reminiscent of the medieval and Renaissance churches of Tuscany." Below, right: Kresge Chapel, M.I.T., 1955; Eero Saarinen, architect — "a protective sanctuary, affords complete physical separation from the outside world"



(More news on page 16B)



Rose Random Tones shown. Wall base is Russet KenCove.®

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THE RECORD REPORTS

(Continued from page 16)



Above: aerial view of Festival Park at Jamestown; reading clockwise from the entrance — Court of Welcome, administration building, gift shop (courtyard), restaurant, Old World museum, New World museum, Memorial Tower, Chief Powhatan's lodge; behind the mall development is a replica of Fort James. At top, right: the administration building; glass is amber and green, to recall colors of Colonial glass. At bottom, right: Memorial Tower, seen along the side of the New World museum



JAMESTOWN'S 350TH YEAR: VIRGINIA'S FESTIVAL PARK CELEBRATES THE EVENT

In connection with the festivities surrounding the 350th anniversary of the founding of the Jamestown colony, the Commonwealth of Virginia has built Festival Park on the mainland near Jamestown Island. Although the colony site itself, one of the "Triple Shrines" of Yorktown, Williamsburg and Jamestown, has been developed under the direction of the National Park Service and the Association for the Preservation of Virginia Antiquities, the state felt there were still some needs to be filled in a year in which many times the normal number of tourists were expected: first, parking space; second, "to welcome, inform, comfort and feed the visitor"; and third, "to lead him through preparatory exhibits into the historical past." They felt also that no facilities for any of these requirements could be placed on the island without disturbing the historical atmosphere.

To fill the first need, the park provides parking space for 1400 automobiles; to fill the second, architects Ballou

& Justice designed a complex of modern buildings including an administration building, a cafeteria and a gift shop; and to fill the third, two museums were included among the new buildings, and replicas built of Chief Powhatan's Lodge and James Fort.

In a state with a reputation for building in the traditional manner, there was of course some argument about whether the new buildings should be contemporary or Colonial. The decision, left to the architects, was determined in large part by the necessity of building within the \$1,200,000 budget.

An attempt was made, however, to relate the architecture to traditional forms. The basic material used for the new buildings was a "simulated old Virginia brick of soft salmon pink." For the administration building, the architects used laminated-wood arches to recall a still older type of construction — the bent-sapling frames of the Indians, used also in the reconstruction of Powhatan's lodge. In the "Old World"

museum, which will house an exhibit donated by the British to the festival, a "bastion-like" element was incorporated, and in the "New World" museum, the designers made use of the serpentine wall.

Working with landscape architect Kenneth Higgins, the architects placed the buildings in a semi-circle around a grass mall, to correspond with the topography and to give a variety of perspectives. A covered walkway borders one side of the mall and connects the main buildings. At the entrance to the mall, flags of the United States, Great Britain, the United Nations, the State of Virginia and the Jamestown Festival fly in the Court of Honor. At the far end of the "sickle," a memorial tower provides "visual punctuation"; symbolically, the river side of the tower "is profusely patterned to reflect the rich heritage of the past," and the mall side "carries horizontal band and vertical fins to imply the steady progression and rise of our civilization."

(More news on page 21)

CHARLES G. DAWES

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Mechanical Engineers: E. R. GRITSCHKE & ASSOCIATES, INC.
Heating Contractor: WILLIAM A. POPE CO.



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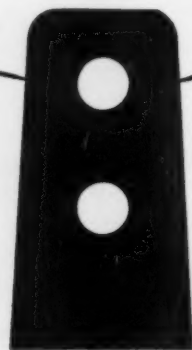
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The State of Construction

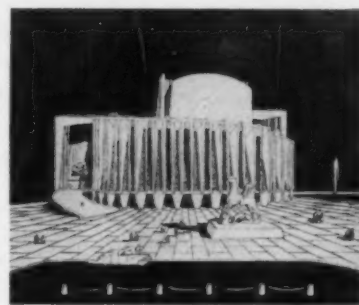
A decline of nine per cent compared with the same month last year was registered in April figures on valuation of contracts awarded for future construction in the United States as reported by F. W. Dodge Corporation. The decline offset the large increase in March and kept the cumulative total for the first four months of 1957 at the same level as last year. Both nonresidential and residential construction were affected. For details see page 384.

What's Wrong with Specs?

The Producers' Council, holding its annual spring meeting, and the Construction Specifications Institute, holding its first annual convention, heard some sharp criticism of the current state of specification writing at a joint luncheon held in Washington May 13. Addressing the delegates on "The Human Side of Specifications," Kenneth M. Wilson, of the Wisconsin architectural and engineering firm E. F. Klinger & Associates, called for greater clarity and brevity in the writing of specifications. "Today," he said, "specifications no longer complement drawings. Drawings, which from time immemorial have been the universal language of man, are now designed to complement the specifications. With this transposition, we have seen our specifications grow in length

APOLOGIES to second- and third-prize winners in international competition for National Opera House for Sydney, Australia, whose entries were incorrectly identified in news story on winners (AR, April 1957, page 16). At right, they are (top) second-prize entry by Philadelphia architects Joseph Marzella, W. W. Cunningham, William Weissman, Milton Brecher, Leon Loscheller, Robert L. Geddes and George Qualls; (below), third-prize entry by Bossevain and Osmond of London

and, unfortunately, in confusion as to their true intent as well." Mr. Wilson urged that specification writers be more specific about the materials they want — "Unpleasant as it may be, failure to accept responsibility for the work of their own hands is at least one of the underlying reasons for our confusing specifications of today"; that specifications be "combined" with well-detailed drawings; and that architects and engineers follow up with sharp field supervision. In a joint afternoon session, producers and specifiers attended a panel discussion on "Construction Specifications"; the speakers included Norman Hunter, president of C.S.I.; Walter Taylor, the American Institute of Architects' director of research and education; David Miller, a director of the Producers' Council; Frank Crimp,



A.I.A., a director of C.S.I.; and William Scheick, executive director of the Building Research Institute. Earlier, in an independent morning session, C.S.I. had presented its highest award, honorary membership, to Colonel Alfred W. Sikes, Chicago engineer.

Coming Up

The American Society of Landscape Architects will hold its 58th annual meeting at the Sheraton-Palace Hotel in San Francisco July 8-10. In addition to the business sessions and seminars, there will be field trips to see important works of landscape architects in the San Francisco Bay Region and chapter displays of work in landscape architecture, including the traveling photographic exhibit, "Landscape Architecture Today" (AR, Jan. 1957, page 16), prepared by the California Redwood Association with the advice and assistance of Northern California landscape architects.

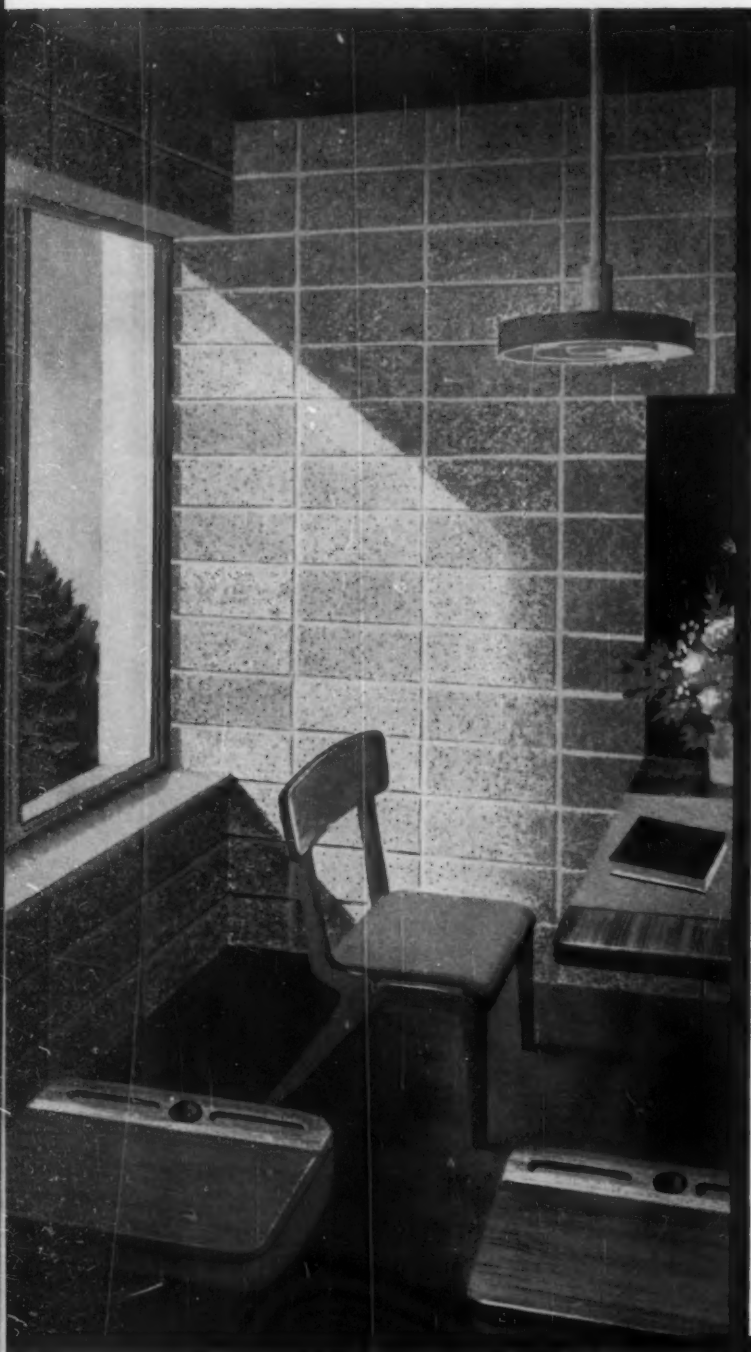
A World Conference on Prestressed Concrete will be held in San Francisco July 29-August 2 under the sponsorship of the University of California and concurrently with the third annual meeting of the Prestressed Concrete Institute. More than 150 engineers from some 41 foreign countries are expected to be among the 900 delegates to the conference. Speakers from a dozen nations will, according to Conference Chairman T. Y. Lin of the University, "spearhead the conference's primary purpose of

(Continued on page 24)



— Drawn for the RECORD by Alan Dunn

"Save the Capitol! — save the Robie house! — What about me?"



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needs no acoustical treatment

In addition, it has high thermal insulative qualities... offers many decorative possibilities... it is low in cost... fire-safe

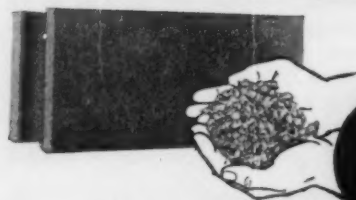
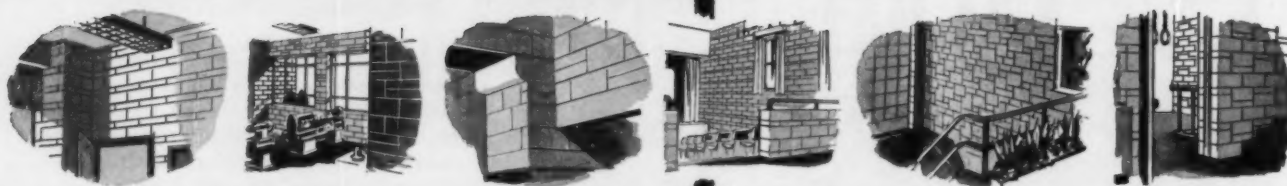
A large number of schools are being built these days of Waylite concrete masonry units.

The fact that the exposed surface of Waylite is one of the most efficient acoustical treatments known is in part responsible. Rooms that are comfortable to the ear are equally important in churches, auditoriums, offices, and many other structures.

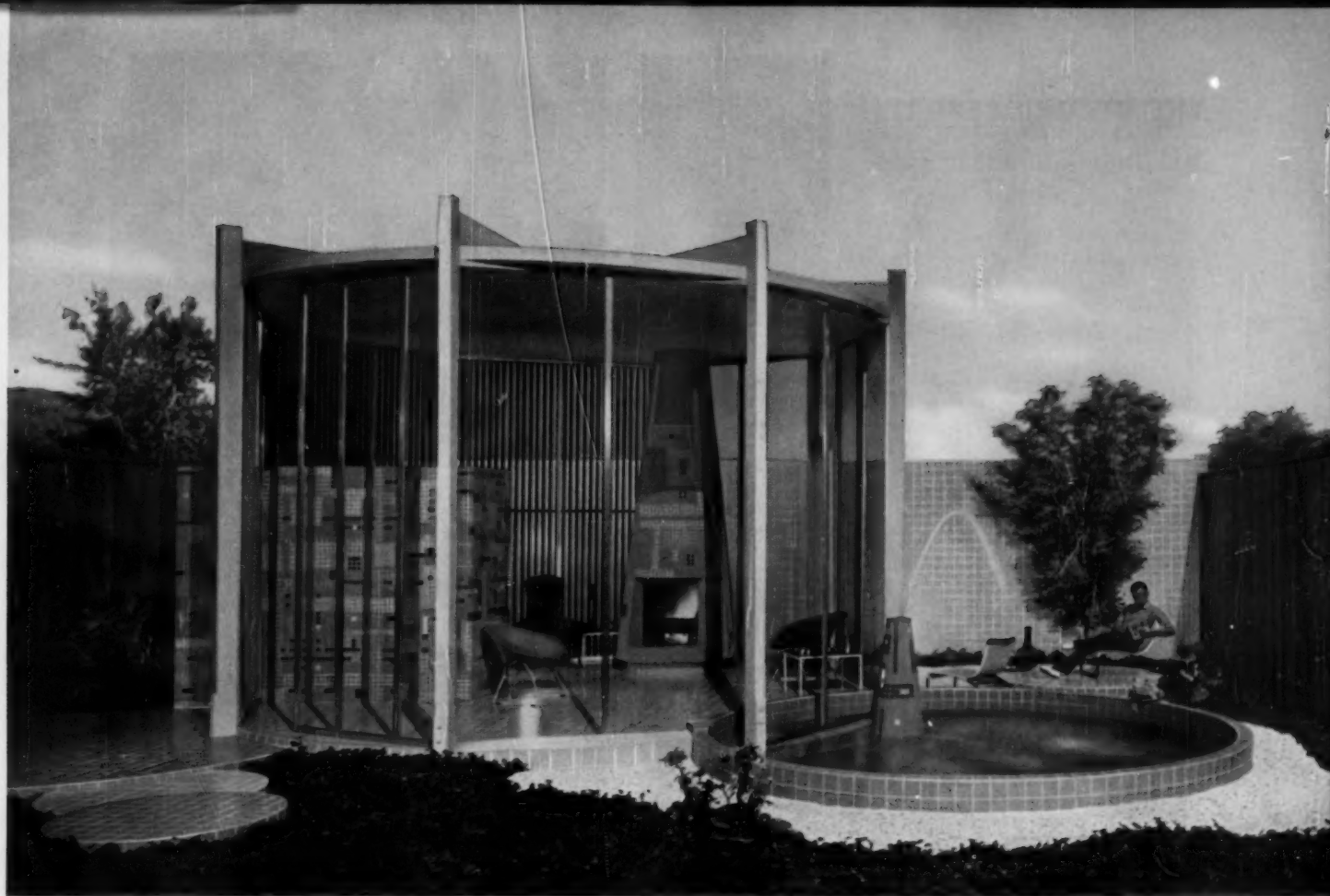
Exposed Waylite is not only comfortable to the ear, but it is pleasing to the eye. The unit patterns shown give some idea of the varied decorative effects that can be easily achieved. The natural surface of Waylite units is attractive in color and texture. Units may be painted—or pigmented during manufacture.

Waylite concrete masonry units are structurally adequate and give a combination of four important factors: (1) high thermal insulative qualities; (2) excellent acoustical values; (3) a wide range of decorative possibilities; (4) low in cost—and fire-safe.

You will find 24 pages of engineering data on Waylite in Sweet's Catalog. Additional information is available on request. Address the Waylite Company, 20 North Wacker Drive, Chicago, Illinois or Box 30, Bethlehem, Pennsylvania.



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utility rooms, recreation rooms and foyers. Tile is the most work-free material on the market. It eliminates the need for waxing, painting or any other refinishing.

Remember ceramic tile in your next residential, institutional or commercial project. It is produced in a myriad of colors, shapes, sizes and surface textures—the widest range of any surfacing material. Today's modern lower cost adhesive installation techniques are giving ceramic tile wider application than ever. Ask your ceramic tile contractor to tell you more about these new methods.

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THE RECORD REPORTS

MEETINGS AND MISCELLANY

(Continued from page 21)

pooling scientific, engineering and manufacturing knowledge and experience." There will also be some 50 papers on materials and techniques, precast prestressed buildings and bridges, prestressed wharves, piles, pavements, thin shells and slabs, research and design and construction in various countries. The American Institute of Architects is among the cooperating societies, which also include the American Association of State Highway Officials, American Concrete Institute, American Society of Civil Engineers, Associated General Contractors of America, Association of American Railroads, International Institute for Prestressing, National Science Foundation, Portland Cement Association and Structural Engineers Association of California.

Plastics for Roof Construction will be the theme of the next meeting of the Building Research Institute's Plastics Study Group, scheduled for September 17-18 in St. Louis. The program will include reports on field experience with plastic materials, complete with cost data on field installations of plastics used as vapor barriers, insulation, flashing, roof surfacing materials and skylights; also a field trip to the new Monsanto Chemical Inorganic Chemicals Laboratory in St. Louis, in the construction of which more than 80 different applications of plastics were made. The meeting is open to architects, engineers and any interested persons in the construction industry. Registration and other information from: Harold Horowitz, Technical Secretary, Building Research Institute, 2101 Constitution Avenue, Washington 25, D. C.

The First International Seminar on Hospital Construction will be held in Geneva September 9-19 under the joint sponsorship of the International Hospital Federation of the International Union of Architects, with the assistance of the World Health Organization. Object is the pooling of the experience of architects, administrators, engineers and doctors responsible, at various levels, for the construction and operation of hospitals and allied establishments. While the present seminar, planned to be the first in a series, is intended primarily for technicians from countries in the Eastern Mediterranean area, North Africa and the Near and

(Continued on page 28)



YALE named architect Paul Rudolph (above left) chairman of Architecture Department of its School of Architecture and Design and, as dean of the School, Gibson A. Danes (above center), who has been chairman of Art Department at U.C.L.A.



MEMPHIS A.I.A. gave its first Gold Medal to Pietro Belluschi, M.I.T.'s dean of Architecture and Planning, shown (right above) with Chapter President A. L. Aydelott. Dean Belluschi was cited as "architect, statesman, educator and writer"



PRODUCT LITERATURE AWARDS for 1957 (AR, April 1957, page 262) were



handed out at luncheon held during A.I.A.'s Centennial Convention in Washington. At left, VIP's on that occasion: (left to right) John R. Magney, A.I.A., Jury of Awards chairman; Elliott R. Selinger, Grant Pulley and Hardware Co.; Theodore I. Coe, A.I.A. technical secretary; Fred M. Hauserman, Producers' Council president; W. L. Dalrymple, U. S. Gypsum Co.; Maxwell Caskie, Reynolds Metals Co. Other top award winner was Douglas Fir Plywood Assn.



BOSTON ARCHITECTURAL CENTER scholarship winners — Peter F. DiMeo, Cabot, Cabot & Forbes Co. employee, Boston Society of Architects Traveling Scholarship; Leon Bailey, also Cabot, Cabot & Forbes, special scholarship for one year's study at M.I.T.; Leonard Saulnier, of Shepley, Bulfinch, Richardson & Abbott, Ames Scholarship



ARNOLD W. BRUNNER PRIZE in Architecture (\$1000) of National Institute of Arts and Letters was given this year to architect John Carl Warnecke (left above) of San Francisco. Center: Architectural League of New York's new president, Dean Olindo Grossi

NATIONAL SAFETY COUNCIL citation went to George Erdenberger, Model Section chief at Voorhees, Walker, Smith and Smith, New York architects, for record of 67 man-years of work without a day's loss due to accident. Mr. Erdenberger is shown above (center) with firm's Perry Coke Smith (left) and Stephen F. Voorhees, senior partner



HOTEL OF THE FUTURE was topic of William B. Tabler, architect of three newest Hilton hotels in U. S., at Chicago meeting of American Institute of Real Estate Appraisers. Above, Mr. Tabler shows mass model of Pittsburgh Hilton to Hilton VP Robert J. Caverly



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TITLE

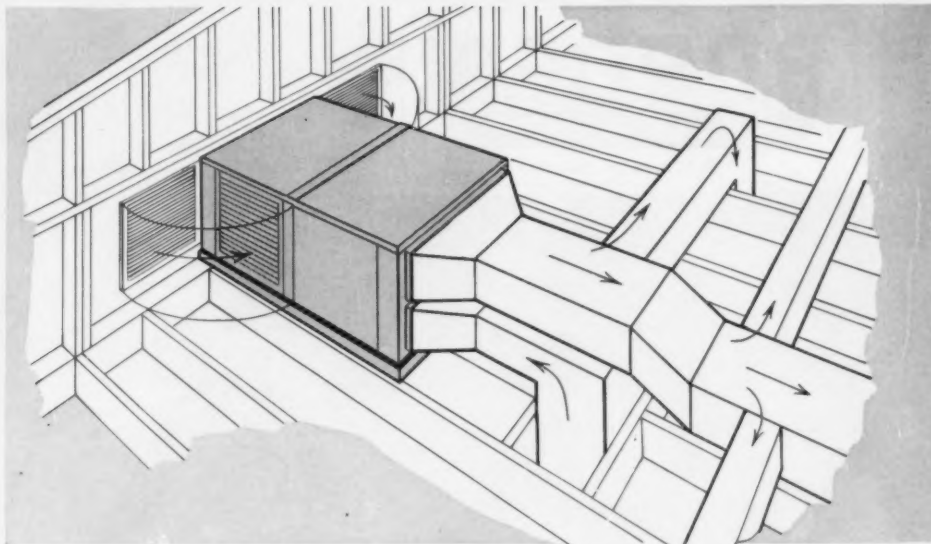
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Mueller Climatrol 915 has no equal for zoned air conditioning efficiency



Gains 20% increase in capacity by utilizing its condensate water

In your plans for any building — residential or commercial — where you're faced with the job of central cooling for small installations . . . or air conditioning certain rooms or isolated areas in larger buildings, include the

economical new Mueller Climatrol Type 915. It's self-contained . . . requires no water.

Gone is the problem of condensate running into ducts, damaging woodwork and plaster as occurs with some makes. Eliminated is the danger of "freeze-up" of the system. Exclusively and completely Mueller Climatrol engineered, the 915 displays unique safety and performance features throughout. All this at remarkably low cost.

Here are six of the countless profit possibilities with the 915



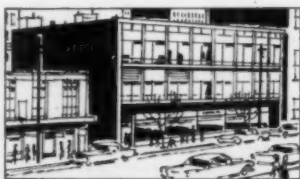
LARGE SPLIT-LEVEL HOMES. The 915 permits separate cooling control of different areas of the home.



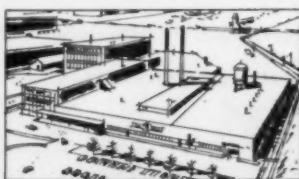
BASEMENTLESS HOMES. Pre-fabricated ducts make attic or utility room installation easy, economical.



MOTELS. Ductwork can be arranged for air conditioning any combination of units.



OFFICE BUILDINGS. Does the work of several room units when combined with ductwork.



FACTORIES. Permits zoned cooling in offices, reception rooms, cafeterias and plant areas.



SHOPPING CENTERS. Brings individualized comfort to separate rental units at low cost.

Because it saves the cost and construction of central air conditioning systems, the Mueller Climatrol 915 is the logical choice for a broad variety of applications. Can be used with direct discharge plenum, connected to existing ductwork or installed with prefabricated ducts.

See your man from Mueller Climatrol,
or write for complete details.

Mueller Climatrol®

2058 W. Oklahoma Ave. • Milwaukee 1, Wis.

More charm at home...more warmth in your office
with mellow walnut **Craftwall** wood paneling!



Stevan Dohanos, famed artist, designed this handsome den using walnut Craftwall wood paneling.

Manpower, Inc. President Elmer L. Winter supervises the 113 national and international offices of his organization from this handsome office paneled in Craftwall.

Craftwall has that genuine hand-rubbed look . . . professionally pre-finished to give the most stain-resistant finish known. Every "plank" selected to show rich, natural grain! **Hardwood Craftwall** for an 8'x12' wall costs as little as \$60, retail.

Today's trend to wood paneling finds dramatic expression in Craftwall wood paneling. The glowing beauty of Craftwall makes it highly versatile . . . as perfect for a restaurant, clinic, reception hall or an office as it is for a home.

Nine woods, in 3 styles, (vertical plank, horizontal plank, peg-and-plank) give you many opportunities for interesting effects: *Elm*, two kinds of *Birch*, *Maple*, *Cherry*, *Oak*, *Walnut*, *Mahogany*, *Knotty Pine*. Their tough finish resists abuse, water splashes, ink, dirt. Maintenance is no expense. Craftwall wipes clean. No waxing needed!

Craftwall helps to solve your problem of attaining beauty at low cost. Modular panels (48"x96", 48"x84", 32"x64", 16"x96", and longer lengths) mean speedy installation. And Craftwall can be fireproofed to code requirements. Client satisfaction is backed by the Craftwall written lifetime guarantee. You'll be proud of the results Craftwall gives!

Please use the coupon below to send for additional data. (When in New York, visit our Roddis Rockefeller Center Showroom, 620 Fifth Avenue.)

Roddis also offers custom Hardwood Paneling — Doors — Wood Finishes — Adhesives — Plywoods — Timberboard

Roddis

Craftwall Idea and Fact File on Request:

Roddis Plywood Corporation,
Dept. AR-757, Marshfield, Wisconsin
Please send me your Designers' Idea and Fact
File on Craftwall wood paneling.

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THE RECORD REPORTS

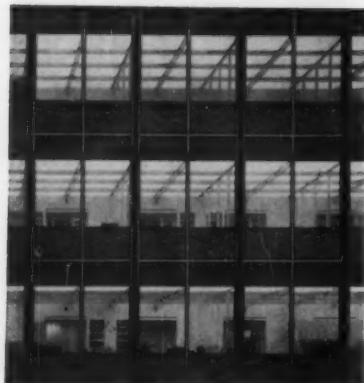
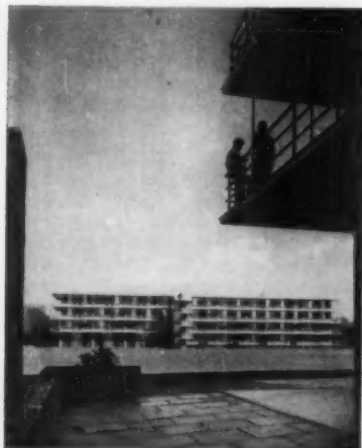
MEETINGS AND MISCELLANY

(Continued from page 24)

Middle East, it is open to persons concerned with hospital construction from all countries. For details: First International Seminar on Hospital Construction, P. O. Box 239, Geneva 2 (Corna-vin), Switzerland.

Designing with the Sun

"Living with the Sun" is the title of an international architectural competition which seeks a design for "a residence which will control, adapt, store and utilize directly and indirectly the sun's energy to create a livable and pleasant climate for man's domestic activities."

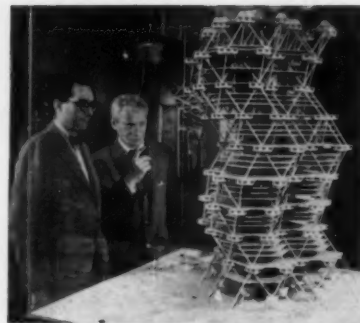


The competition, which is sponsored by the Association for Applied Solar Energy and the Phoenix Association of Home Builders and approved by the American Institute of Architects and the International Union of Architects, closes August 15; registration of applicants closed June 1. Professional adviser is James M. Hunter, F.A.I.A., 1126 Spruce Street, Boulder, Colo. First prize will be \$2500 and the architectural contract for building of the residence, which will be erected as soon as possible after the judging on a one-acre site near Phoenix. At the discretion of the jury, a second award of \$1500, a third award of \$1000 and a fourth and fifth award of \$500 each may be made. Jurors, who will meet September 14-15 at Grand Canyon, are Dean Pietro Belluschi of M.I.T.'s School of Architecture and Planning; Architect Carlos Contreras of Mexico City; Thomas Creighton, editor of *Progressive Architecture*; James W. Elmore, Phoenix architect and associate professor of architecture at Arizona State College in Tempe; and Nathaniel Owings, of Skidmore, Owings and Merrill.

Other current competitions

Architects and engineers as well as electrical contractors, electrical wholesale distributors, and electrical utility personnel — principal or employee in all cases — are eligible to compete in the 1957 International Lighting Competition sponsored by the magazines *Electrical Construction and Maintenance*, *Electrical Wholesaling* and *Electrical World*, with the cooperation of the National Lighting Bureau (National Electrical Manufacturers Association). Cash awards of \$100, \$50, and three of \$25 each are offered for outstanding lighting installations in each of six categories — industrial, store, office, institutional, outdoor lighting and residential lighting. The competition closes October 25. Inquiries to: Berlon C. Cooper, chairman,

ARCHITECTURAL PHOTOGRAPHERS held exhibit of members' work as feature of their association's recent convention, awarded prizes for the three photographs at left: top, Frank Lotz Miller's photograph of Tulane dormitory, Andry & Fietel, Ferrel & Wolf, Ricciuti & Associates, Architects; center, Louis Reens' photograph of West Bridgewater, Mass., Elementary School, The Architects Collaborative, Architects; bottom, Mason Pawlak's photograph of General Motors Technical Center, Detroit, Eero Saarinen and Associates, Architects



STRUCTURE FOR TOMORROW — Louis Kahn (right), Philadelphia architect and planner, with Prof. Alan R. Solomon, director of Cornell art museum, inspecting Kahn's model of "tomorrow's municipal office building," project sponsored by Universal Atlas Cement Co. Building would utilize triangular frames of precast, prestressed concrete; hollow concrete sections provide arteries for air conditioning, heating and other service lines and a central core consolidates elevators and stairways



ALUMINUM SCULPTURE for aluminum award — the emblem of the 1957 R. S. Reynolds Memorial Award, presented at A.I.A. Centennial Convention to the three young Spanish architect winners (*AR*, May 1957, page 16B), was sculpture by Theodore Roszak, shown above at work on emblem — rivets and tack welds form temporary fastenings. Later all parts were permanently brazed and welded into a single structural unit

1957 International Lighting Competition, 330 West 42nd Street, New York 36, New York.

Parents' Magazine has announced its eighth annual Builders' Competition for the Best Homes for Families with Children. This one is for builders, but architects may wish to suggest entry of eligible houses they have designed. Houses must have been built and sold between July 1, 1956 and June 30, 1957 and must be owner-occupied by families with one or more children, cost \$25,000 or less.

(More news on page 32)



WHO SAID DIRT CHEAP?

It costs your clients plenty and tarnishes your best work

DIRT CAN "age" a building fast. In hotels, drapes, carpeting, furniture and decorations depreciate rapidly. Occupants suffer discomfort of smoke-filled rooms, as well.

In any building, walls, fixtures—all things inside—lose their attractiveness and value before they should.

Most of this soiling is caused by airborne dirt particles less than 1/25,000 of an inch in size!

Now Honeywell's new Electronic Air Cleaner can remove particles this small—even 100 times smaller... ridding the air of contaminants *before* damage occurs. It's 6 times more effective than the ordinary mechanical air filter*.

The results: the practical efficiency and

interior beauty you achieve remains like new indefinitely.

Occupants enjoy greater comfort, owner's cleaning and replacement costs drop appreciably.

It is an impossible task for mechanical type air filters to remove microscopic contaminants like oil smoke, fumes, tobacco smoke and most of the fly ash in the air. And these are the ones causing the greatest staining. In this area lie bacteria and viruses, too, the cause of much illness.

Specify a Honeywell Electronic Air Cleaner. Save your creative efforts and your clients money as well. For complete details call your local Honeywell office or write Minneapolis-Honeywell, Dept. AR-7-232, Minneapolis 8, Minnesota.

*According to tests developed at the National Bureau of Standards, electronic air cleaners remove at least 90% of the dirt particles causing the greatest staining, while ordinary mechanical filters remove only about 13%.

Honeywell



First in Controls



*Office of the Liberty Life
Insurance Company, Greenville,
South Carolina.*

*Architect:
Carson & Lundin, New York.*

*General Contractor:
Daniel Construction Company,
Greenville.*

HOPE'S CUSTOM STEEL WINDOWS AND FRAMES

Liberty Life Insurance Company of Greenville, South Carolina take pride in the beauty of their office building and its functional utility and convenience. On each of its four floors long runs of Hope's Custom Steel Windows, fixed and vertically pivoted sash, are fitted in Hope's Pressed Metal Framing. In the building there are also large installations of direct glazing in these custom-built sub-frames. The flexibility of Hope's products for layout purposes helps the architect greatly in designing the large glass areas in contemporary style buildings, especially as the fixed window requirements of air conditioning are now always a consideration in a modern office.

Both architect and owner may take extra satisfaction in the assurance that when Hope's Steel Windows are specified either as Window Walls or in individual openings, the maintenance costs will be low and the window operation dependable for the life of the building. Make full use of Hope's engineering and planning assistance. It is always yours without obligation. You will find further information on Hope's Windows in Sweet's File. Hope's latest catalog is 152-AR. Write for it now.

HOPE'S WINDOWS, INC., Jamestown, N. Y.

THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS



Gymnasium, LaSalle Senior High School, Niagara Falls, N. Y.
Architects: Sargent, Webster, Crenshaw & Folley, Syracuse, N. Y.
Cannon, Thiele, Betz & Cannon, Niagara Falls, N. Y.

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contractor can get them now, under different brand names, from nearly all leading fabricators. If you'd like specific data on the basic HETRON resins which we make, or the names of manufacturers of these panels, write us.

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ISSUE NEW DEFINITIVES FOR CAPEHART MILITARY HOUSING

Broad and flexible guides for architects designing military housing under the Capehart Housing Program have been issued by the Air Force. These are in the form of definitive drawings prepared by the firm of Spector and Montgomery, architect-engineers of Falls Church, Va.

These prototypes comprise a portion of the larger Air Force program involving definitives (AR, Aug. 1955, page 24) applicable to a wide range of installations—mess halls, barracks, officers' clubs, hangars, etc.

Spector and Montgomery turned out their drawings under the technical supervision of the Technical Branch, and administrative supervision of the Architectural Branch, Assistant Chief of Staff, Installations, Headquarters, USAF. Personnel directly responsible for the brochure containing these drawings are Leon Julius, chief of the technical branch; Lt. Col. E. H. Richardson, deputy chief; Lt. Col. E. J. Moses, all members of the Family Housing Division under the general supervision of Col. H. F. Troutman.

Early last month there were 15 proj-

ects in the Air Force program actually under construction. These involved 10,811 units. An additional 51 projects, involving some 32,000 units, are in various stages of design or have been readied for construction.

Officials charged with responsibility for this part of the military housing program were keeping close watch on legislation in Congress. It appeared certain that at least one additional year of life would be breathed into this operation. Both House and Senate had voted to extend the military housing portion of the basic law one full year beyond its expiration date of June 30, 1958, and the omnibus housing measure went to conference with this point resolved.

Mr. Julius explains that one of the most serious problems encountered has been the time element. From issuance of a design directive until a project is placed under construction, a period of approximately one year elapses. In order to acquaint architect-engineers with Air Force design philosophy as quickly and as painlessly as possible, the Air Force found it expedient to prepare the bro-

chure of definitive drawings.

Use of these guides is not confined to the Air Force, although this branch has been responsible for their preparation. Copies have been issued to all Air Force Command Headquarters in the U. S. and overseas; to the Bureau of Yards and Docks, U. S. Navy and to the Office of the Chief of Engineers, U. S. Army.

Adaptation of the drawings to specific operation of the program was described by Mr. Julius:

"The definitive drawings are given to architect-engineers for their information and guidance. They are not expected to serve as inflexible guides in the design of family housing. They are merely intended to outline the basic elements that should be followed to provide the best possible living standards for Air Force personnel under existing legislation. Designs have been deliberately based on conservative standards with accent on livability in order to appeal to a majority of Air Force personnel."

"Planning and circulation were prime considerations, with entrance halls giv-

(Continued on page 360)



NEW DEFINITIVES consist of 30 sheets, 20½ x 15 in., each containing perspective, floor plan, alternate layouts and programming and master planning guide data for a particular kind of family housing under the Capehart program. Examples shown here (unrelated) are selected to suggest character of drawings and stylistic variety





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*Aluminum opens
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New freedom of design!



HAUSERMAN MOVABLE WALLS

It's Hauserman and Reynolds who bring you this new concept in movable walls...but it's *aluminum* that opens up such wide creative scope! Aluminum gives you fascinating embossed textures, to use in natural metal or in any color. And aluminum extrusions add still further range...joining wall sections with almost invisible hairlines, or narrow beads, or wide column effects...using recessed or protruding posts in any profile and in any finish including anodized colors!



OF REYNOLDS ALUMINUM

Now you can stack panels as you please... the possibilities are limitless! And with this greater beauty you have the proved functional advantages of Hauserman Movable Walls...earliest occupancy, lowest maintenance, lifetime service. Write for descriptive literature. Or consult the Yellow Pages and call the nearest Hauserman representative. The E. F. HAUSERMAN COMPANY, 6725 Grant Avenue, Cleveland 5, Ohio. Hauserman of Canada, Ltd., Toronto, Ontario.

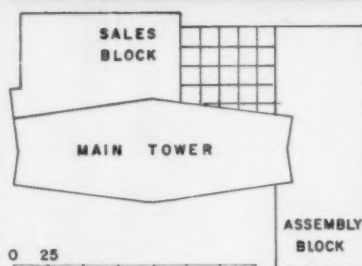
See "Circus Boy", Reynolds dramatic adventure series, Sunday's, NBC-TV Network.



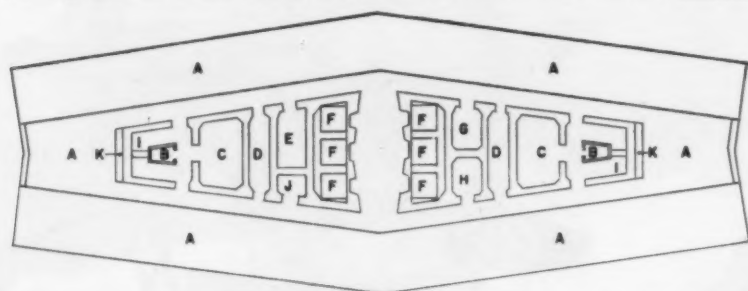
NEW LANDMARK FOR BRITISH COLUMBIA: B.C. ELECTRIC TOWER

A diamond-shaped central core of reinforced concrete to house all services and provide almost the entire structural support of the building is the key to the scheme evolved for the new Head Office of the B.C. Electric Company in Vancouver. Sharp & Thompson, Berwick, Pratt were the architects, Fred N. Severud the structural engineer, John Laing & Son (Canada) Ltd. the general contractors. Tom Ingledow, vice president and executive engineer of B.C. Electric, personally directed the project for the company. After three years of planning, the building was constructed in 18 months and officially opened on March 23 of this year. It houses more than 1000 employees, provides a total floor area of 368,758 sq ft; estimated cost was \$6.5 million.

The building covers only two thirds of the site at ground level, and extends above the third floor as a tower occupying only a quarter of the site. Tower floors are cantilevered from the central core, with only light structural members on the outside walls to provide rigidity. Shape of the core resulted from compressing elevator shafts, stairs, wash-



21-story tower is one of three structurally independent components comprising the new Head Office of B.C. Electric. With the one-story assembly block and the three-story sales block, the building covers only two thirds of the site at ground level, one quarter above the third floor. Adjacent is the company's recently completed Dal Grauer Substation (visible at extreme left in photo at right above)



rooms, heating and ventilating ducts, piping and other services into the least possible space; the core is surrounded by rectangular blocks of office space, all outside space, with no employee more than 15 ft from a window. The central core extends two and a half stories above the top floor to house the elevator equipment and air conditioning apparatus.

Exteriors are curtain walls of gray porcelain enameled steel panels with fiberglass insulation and 50,000 sq ft of double-paned glass with insulating airspace, fitted in a grid of aluminum extrusions; Italian glass mosaic tile covers lower exterior and service penthouse. Metal partitions, movable at 39-in. intervals, make interior office walls.

Plan of typical tower floor and photo of typical general office space it produces. Key to plan: a. working area; b. janitor supplies; c. lavatory; d. ducts; e. elevator machinery; f. elevators; g. freight elevator; h. mail conveyor; i. stairway; j. transformer vault; k. coal storage



(More news on page 40)

AFTER THE ARCHITECT....THE ARTIST



New G-P prefinished paneling resists crayon—and more.

Its hard plastic finish protects fine veneers against alcohol, oil, sunlight and soap.

There are many good reasons known to architects and builders for selecting hardwood plywood paneling. Now add two important new G-P developments:

Burnishing

After normal fine sanding, V-Grooved G-P paneling is burnished to a satin dry-shine. This treatment seals pores, eliminates raised fibres and gives a better base for finishing.

Plastic Top Coat

Composition: Comparable to baked enamel with approximately 50% more solids by weight than most competitive paneling finishes.

Application: G-P plastic top coat is rolled on in a finishing plant constructed

in 1957. Methods, material and equipment are the newest in the industry.

Heat Resistance: Approximately twice that of lacquer base finishes.

Sunlight Protection: G-P plastic finish will not darken with age or exposure to light and acts as a barrier to ultra-violet rays, a major cause of wood discoloration. The natural color of G-P paneling is protected.

Normal Damage Resistance: Synthetic resins in this new finish withstand crayon, alcohol, grease, soap, scratches and general household abuse far better than finishes having ordinary lacquer or wax bases.

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Unit consists of G-P prefinished hardwood plywoods suitable for file folder or wall display. Includes: Walnut, Birch, Blond Cativo, Cherry, Red Gum, Blond Oak, Honeytone Oak, Ash.

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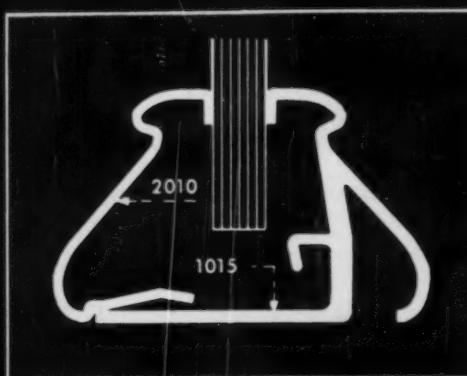


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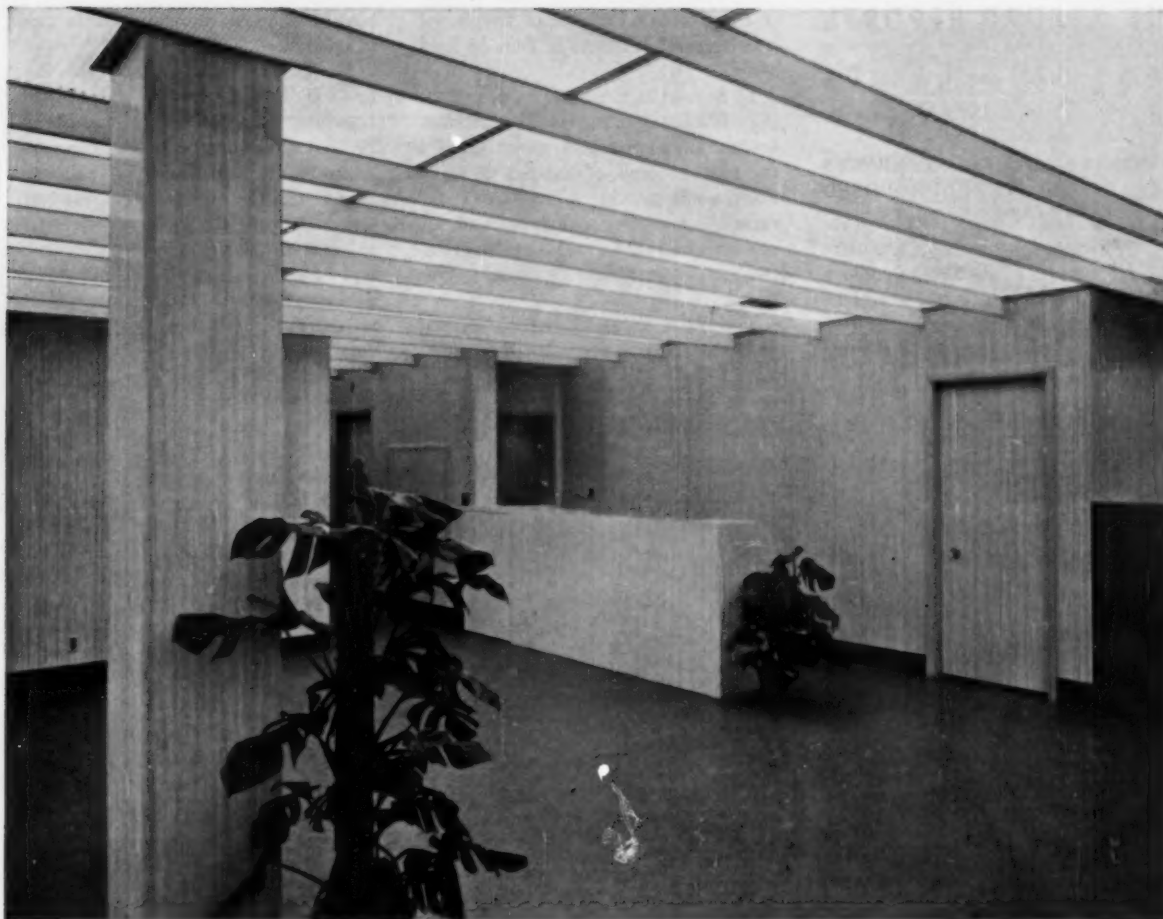
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THE RECORD REPORTS NEWS FROM CANADA

(Continued from page 36)

COMMONWEALTH CONFERENCES ON ARCHITECTURE PROPOSED

Kenneth M. B. Cross, president of the Royal Institute of British Architects now on a world tour, has proposed a series of Commonwealth conferences on architecture. Mr. Cross made the proposal in a speech at the annual meeting

of the Toronto Chapter of the Royal Architectural Institute of Canada held May 23.

To be held in turn, every three years, in each country of the British Commonwealth, the conferences would fulfill a two-fold purpose of mutual interest. They would provide a medium (1) for exchanging professional views and experiences and (2) for assessing the architect's position amidst changing conditions.

The R.I.B.A., Mr. Cross said, would welcome the opportunity to act as a

host for the first conference, to be held in London.

Mr. Cross is accompanied on his tour by C. D. Spragg, secretary of the British Institute. Leaving London on March 20, they have already visited Singapore, Australia, New Zealand, Fiji, Hawaii, San Francisco, Vancouver, Edmonton and Montreal. They were guests at the recent A.I.A. convention in Washington and were to attend the R.A.I.C. "Golden Jubilee" Assembly in Ottawa. Afterwards, they were to fly to New York, then back to London.

He and Mr. Spragg, Mr. Cross said, brought with them a greeting of goodwill and fellowship transmitted "with considerable feeling" by the R.I.B.A. Council. At the same time, he continued, their visit presented an opportunity to focus attention on questions of education and professional recognition.

The British Institute feels more elasticity in the registration requirements of its component societies is essential to enable younger architects to seek careers wherever they desire. Mr. Cross suggested that one general examination might be held for all parts of the Commonwealth, supplemented by local examinations where necessary. Thus, a

(Continued on page 44)



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Toteline school trays can enhance any classroom... because of their design and modern, smooth-surfaced material. Available in colors to blend handsomely into any decor.

These are sturdy reinforced plastic trays, light weight yet rigid, and tough enough to stand up under all school usages. They last indefinitely and clean simply by dipping in hot water. Many sizes available in a wide variety of colors.

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TRAYS AND BOXES

TOTELINE



BRITISH COLUMBIA Telephone Company is building major extension to its head office, William Farrell Building in Vancouver. Main portion of extension has composite function, housing both offices and equipment; four-story structure on roof also contains offices. Construction is reinforced concrete with main façade a curtain wall of aluminum mullions and porcelain enamel sandwich spandrels. End (north) wall is brick. Tower is for Trans-Canada television and telephone microwave system. Building, comprising about 170,000 sq ft of floor area, is to be ready for occupancy in late 1958. Architects and engineers: McCarter, Nairne & Partners



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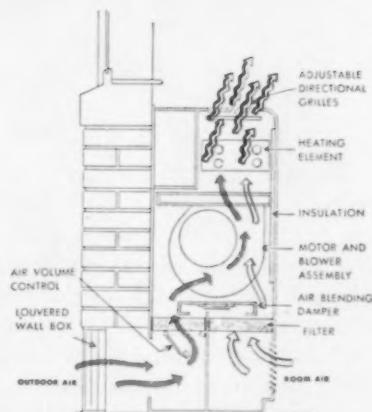
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► In appearance, in low sound level, in economy of first cost, installation cost and maintenance, RITTLING SCHOOLMASTER Unit Ventilators meet the exacting standards of the architect, engineer, school personnel and codes.

RITTLING SCHOOLMASTER design is adapted to standard control units giving any desired heating and ventilating cycles based on load requirements.

Five RITTLING SCHOOLMASTER sizes give the correct answer for every room, — large and small. They are available with open and closed storage units and full length Rittling Sil-Vector Radiation. Write for full information and name of your Rittling representative.



Cross section of RITTLING SCHOOLMASTER shows flow of outdoor and recirculated room air as it flows through dampers, filters, blowers and heating element.

{ Also manufacturers of complete lines of RITTLING Baseboard Radiation, Wall Radiation, Finned Tube Elements, Cabinet Convectors, Unit Heaters and other heat transfer equipment. }

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Rosewood, background for elegance...a spirited graciousness

■ Vic Skrebneski of Chicago's Studio One, who has produced some of the most exciting work of the Midwest's new photographic exhibits, captures the vibrant charm of Brazilian Rosewood by Stem in this self-portrait. "When you want a photograph to say everything that is in its artistic power, a highly finished panel of fine, rare wood has no equal as a background." In a living or working area, as in photography, rare wood makes its noble presence felt by all who enter. The warm vibrance of Rosewood, veneered as only Stem can do it, is that kind of material. Through the catalytic artistry of the architect, superb wood paneling and graceful living strike up a happy match. When rare

woods from the forests of the world are used, there is a spirited graciousness — a strength and beauty that dwell in every ripple of its meticulously finished grain. And yet, beautiful wood is the essence of peace; it brings serenity to a room in a way that is all its own. Now, Stem brings you, through the magic of modern factory methods, all the nobility, splendor and lifetime permanence of the finest veneer that tradition knows. And you can afford to be generous with this wood, for the cost is low.

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RARE WOODS FROM STEM



THE RECORD REPORTS NEWS FROM CANADA

(Continued from page 40)

student trained in a West African office could pass the general examination in his own country, then, upon moving to London or Toronto, could qualify professionally by passing a local examination there.

George Whale, chairman of the Toronto Chapter, did not comment upon

Mr. Cross's proposals, but it was evident from the applause that they had been heard by a receptive audience.

1957 HIGH OF \$6.7 BILLION EXPECTED IN CONSTRUCTION

Construction in 1957 will reach a new high of \$6.7 billion, according to the latest estimate of the Dominion Bureau of Statistics. This is five per cent above last year's total, and would have been more were it not for credit restrictions

and a slowdown in house building.

Hospitals and stores, plus major developments in power, gas and oil facilities, will lead the parade of new projects.

Meanwhile, while the general level of business activity remains slightly above that of 1956, there is increasing evidence of spottiness. The pressure of rising costs has produced a profit squeeze in fields where intense competition prevails, notably in chemicals and consumer durables. Residential construction, of course, is a soft spot. Other dubious quantities are lumber, non-ferrous metals and textiles.

An important stimulating influence in the economy is the continued high level of capital expenditures, although there is some evidence now of a tendency to level off.

(Continued on page 46)



Get crisper cleaner drawings with **CASTELL**

In engineering, designing and drafting rooms all over America, skilled craftsmen are at work with the incomparable Castell—the only drawing pencil with all these qualities:

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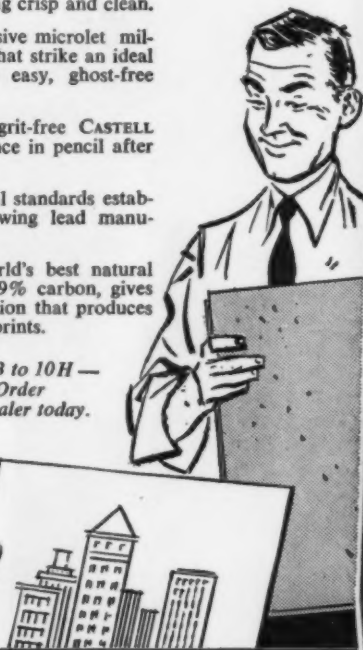
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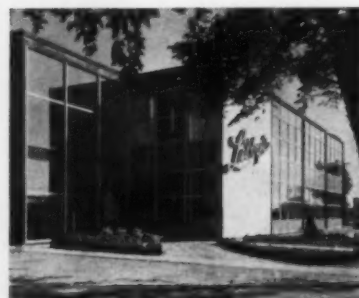
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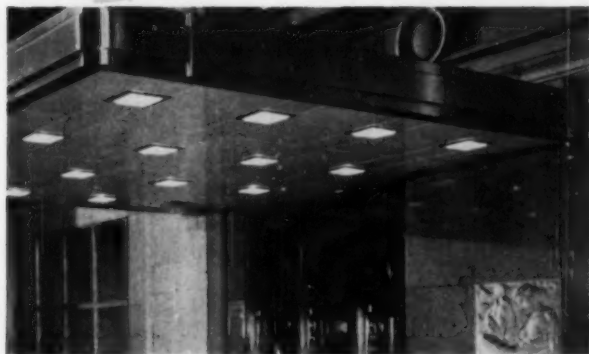


A.W. FABER-CASTELL
PENCIL CO., INC. NEWARK 3, N. J.



LIBBY, MCNEILL & LIBBY of Canada Ltd. completed this new administration building in Chatham, Ont., last year at a unit cost of one dollar per cu ft (not including furnishings). It has a structural steel frame, is two stories high throughout, with laboratory, cafeteria and plant washrooms on the first floor; general and executive offices, conference rooms and office machines room are on the second floor. The building is connected to an existing plant behind it by means of a stairway and corridor which join levels and provide direct access from the plant to cafeteria, washrooms and general offices. Main objective in planning was flexibility, achieved in the structural design by an open span on the general office and in the mechanical and electrical design by use of a cellular steel floor system and luminous ceilings which, in the general office, have air conditioning plenum above. All partitions are movable. Architect: Joseph W. Storey, Chatham; mechanical engineer: R. W. Dixon; electrical engineer: McGregor-Anderson

ANYWHERE ... FOR ANY BUILDING



For a high lighting level, Moe Light fixtures were close spaced in this dignified metal canopy.



Low surface brightness and varying light levels from Moe Light fixtures make this coffee shop warmly inviting.



Fully but softly lit, every piece of merchandise in this store is well displayed under high level, Moe Light recessed fixtures.

Lighting to enhance magnificent designs like these is no problem when you specify Moe Light recessed fixtures.

For any lighting level in any application you now can choose from hundreds of Moe Light combination of fixtures styles, glasses, lenses and trim. Simply combine Moe Light elements to get the effect you want.

MOE *Light* COMMERCIAL RECESSED LIGHTING FIXTURES

GUIDE TO LIGHTING DESIGN

Planning is organized for you and answers are easy to find in the Architect's Manual of Moe Light commercial recessed fixtures. Light coefficients, light distribution diagrams and wiring requirements are specified to help you plan good lighting.



Be sure you have this basic source book in your file.

LIVE BETTER *Electrically*



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Factories at: Ft. Atkinson and Sheboygan, Wis; Hopkinsville and Princeton, Ky.; Los Angeles 22, Cal.; Ft. Smith, Ark.

- ☐ Send me the FREE Architect's Manual of recessed lighting.
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Company _____
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two superior open steel FLOOR GRATINGS

BY GLOBE

1

Safety

GRIP-STRUT®



**FOR MAXIMUM
SAFETY ALL OVER
YOUR PLANT**

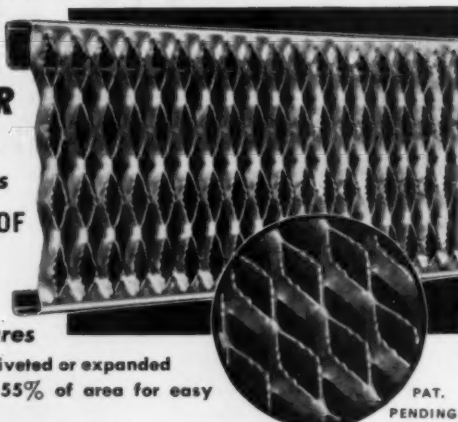
Important Safety Features

- ★ FIRE PROOF ★ SLIP PROOF
- ★ MAXIMUM STRENGTH
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Important Economy Features

- ★ All one piece, not welded, riveted or expanded
- ★ Open space in excess of 55% of area for easy access of light and air
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- ★ Cut and installed like lumber by your own maintenance force. ★ Low in original cost. ★ For balconies, no secondary sprinkler heads needed

Ideal for work platforms, stair and ladder steps, flooring, balconies, catwalks, machinery guards, fire escapes and for original equipment safety treads.



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2

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**WELDED
grating**
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Heavy Duty Applications**

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- ★ Vertical alignment of the main load bar assured
- ★ All bars are load carrying bars including secondary bars
- ★ Anti-skid pattern

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Each secondary load bar (A), as projected welded to the primary load bar (B) has a shear strength of 5,000 pounds per weld. There are 28 such projection welds to a square foot of grating. This means that GOLD NUGGET Welded Grating can sustain greater shock loads than other gratings.

For the complete details of these revolutionary new gratings, write for new catalogs today. Distributors in all principal cities. Consult the yellow pages in your phone book under "GRATING".

108

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SINCE 1914

4020 SOUTH PRINCETON AVENUE • CHICAGO 9, ILLINOIS

**10,000
POUNDS**



THE RECORD REPORTS NEWS FROM CANADA

(Continued from page 44)

From a short term viewpoint, difficulties may crop up when the momentum of the present growth program abates. Some readjustment may develop — perhaps next year — but it is expected to be relatively mild and probably salutary.

So far as the medium and long term are concerned, no one can fail to be impressed with the outlook for business. Canadians have abundant resources and a plentiful supply of capital from abroad to supplement their own funds in developing their country rapidly.

NEW FELLOWS, ARTS AWARD ANNOUNCED BY THE R.A.I.C.

The Allied Arts Medal, presented each year by the Royal Architectural Institute of Canada for outstanding achievement in arts related to architecture, has been awarded to Miss Yvonne Williams of Toronto, designer and maker of stained glass, and Alan B. Beddoe, O.B.E., of Ottawa, artist.

D. E. Kertland, of Toronto, president of the R.A.I.C., says Miss Williams and Mr. Beddoe have become two more of an increasing group of outstanding Canadians in the fields of allied arts whose works have brought credit to their professions and pleasure to the public.

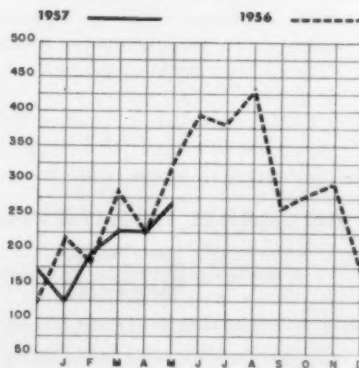
Elected as Fellows

Election of 13 new members to the College of Fellows was also announced by Mr. Kertland. The architects honored are Douglas E. Catto, Toronto; Colin Drever, Kingston; William E.

(More news on page 48)

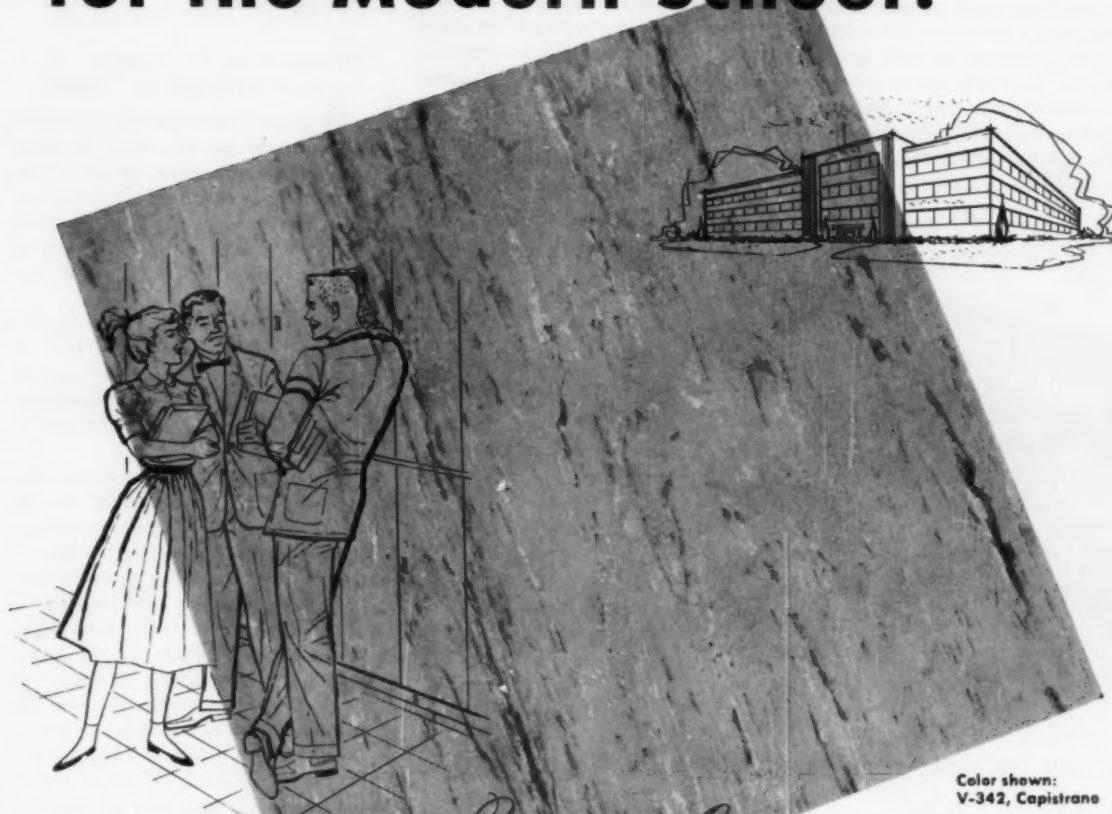
Contracts Awarded: Comparative Figures*

(in \$ million)



*Compiled by the Editor and staff of The Building Reports, from information collected by McGraw-Hill Building Reports.

"FLOOR-PLANNED" for the Modern School!



Color shown:
V-342, Capistrano

Vina-Lux FLOORS with *Micromatic Veining*

Plan your school with Vina-Lux floors. This modern vinyl-asbestos tile answers all the floor requirements of today's educational buildings. With the subtle styling of exclusive new *Micromatic veining* in 21 light-reflecting colors, you'll discover unlimited design possibilities for more attractive and effective school interiors.

Vina-Lux is tough and durable, too. It withstands the relentless tramp of feet — shrugs off muddy corridor foot traffic, cafeteria grease, laboratory chemicals — and its smooth, tight surface keeps a fresher, cleaner look with minimum maintenance. Vina-Lux looks better — performs better. We'll gladly send you samples.



AZROCK FLOOR PRODUCTS DIVISION

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CONGRESS PASSES FUNDS FOR AIRPORTS, HIGHWAYS

Federal aid to airport construction and highway building was assured in the Commerce Department appropriations bill passed by Congress early last month.

The \$613 million fiscal 1958 money measure contained \$25 million for the airport construction program, which will be used along with \$17.5 million pending from prior appropriations. This gives the Civil Aeronautics Authority just over

\$42 million for this type of work during the fiscal year.

The bill also authorized use of \$1.6 billion from the Highway Trust Fund for Federal aid to highway construction.

The construction expenditure statistics of the Business and Defense Services Administration were not as severely affected in the general BDSA curtailment of 1958 funds as had earlier been expected. A spokesman for the building materials division said it was thought

the shop would operate at about the same personnel level as in fiscal 1957, and that only the continuing effort to develop better statistics would be affected drastically.

THREE-YEAR EXTENSION OF LEASE-PURCHASE IS ASKED

The Senate's subcommittee on public buildings and grounds called for carrying on the lease-purchase program of the General Services Administration for another three years. A number of changes were recommended to make the program more palatable for lenders and contractors.

The executive session action followed hearings during which GSA had announced it would immediately reinstate the lease-purchase program after a temporary suspension ordered earlier this year.

Broadly stated, the amendments proposed by GSA and backed by the subcommittee would (1) permit starting the purchase contract term at the start of construction in order to eliminate short term borrowing for construction; (2) allow GSA some flexibility with respect to the cost of the buildings (the agency is not now permitted to change its original estimate, despite the fact that costs often rise in the months from the time Congress approves a project until it is ready for bids); (3) extend the act for three more years past its expiration date of July 22, 1957; (4) remove the limitation of the annual amount of payments to 15 per cent of the fair market value because of the difficulty of determining in advance what the fair market value will be; and (5) put in new language pledging the full faith and credit of the government in the lease purchase contracts. The next step was for the full public works committee of the Senate to consider its subcommittee recommendations.

With resumption of the program, GSA announced it would continue advertising 39 projects costing an estimated total of \$71 million during the next five months. The agency said early this year it suspended the program because of inflationary pressures caused by unnecessary competition for labor, materials and equipment.

\$1.5 BILLION SCHOOL BILL HEADS FOR HOUSE DEBATE

One of the most controversial pieces of legislation in the 85th Congress, the
(Continued on page 362)



VAPOR CAN'T GET BY— FLOORS STAY DRY with Sisalkraft MOISTOP

Sisalkraft Moistop permanently stops the upward migration of moisture through floors. Applied under concrete or in crawl spaces, this superior product protects against the damages of water vapor for the life of the structure. Sisalkraft Moistop combines the inertness and permanency of polyethylene with the strength of Sisalkraft. Meets FHA and VA minimum property requirements.

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Western Editor:

ELISABETH KENDALL THOMPSON

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CUTTING OFF A NOSE SPITES THE FACE

NAMES MAKE NEWS" is an old newspaper adage that continues to be current because it states a fact so basic that a newspaper can't ignore it in forming its policy. Names *do* make news — all names but the architect's.

A dog bites a person — man, woman or child; this is news, and is so treated. An accident occurs, a prize is won, a party is given — the names of the people involved in these events are newsworthy and are duly reported.

A building is built, a large project is proposed, the face of a city is changed — the names of city officials, contractors, building owners, dignitaries of this or that organization, are mentioned and identified. But the name of the man who gave the project form, whose ideas, for better or worse, affect the pattern of living of many people — this name is all too often omitted in the news story on the building.

Why?

The only answer newspapers have so far made to this question is that since architects don't advertise, the newspaper isn't interested in "giving them free publicity."

Do the people who give parties, who get bitten by dogs, win prizes, advertise? Is that why the newspaper considers their names newsworthy? If they don't, then the press today is governed by a double standard of newsworthiness.

There are no faceless men of science, no anonymous men of medicine (unless they ask not to be mentioned by name). The trial lawyer's name is on everyone's tongue at least while a trial is on.

Do these professionals advertise? Have you ever seen an advertisement for a law firm's services? What makes their names more newsworthy — and less advertising-prone — than the names of the men who design the buildings where scientists perform their modern miracles, where doctors bring healing to the sick, where lawyers probe for answers to life and death questions?

These buildings which help to shape our way of living, of working, of learning, of playing and worshipping and getting well were not dropped fully built onto their sites. The actuality of each resulted from concepts in the minds of men, men who conceived the project, men who conceived its form, men who detailed its construction and men who carried out its construction.

There is plenty of newsworthiness in the names of *all* the men who are a part of such a project, not in just some of them and certainly not just in those who advertise. If advertising becomes the criterion for newsworthiness, what strength has a newspaper as a newspaper? Whose face is being spited by cutting off a nose? The newspaper's just as much as the architect's.

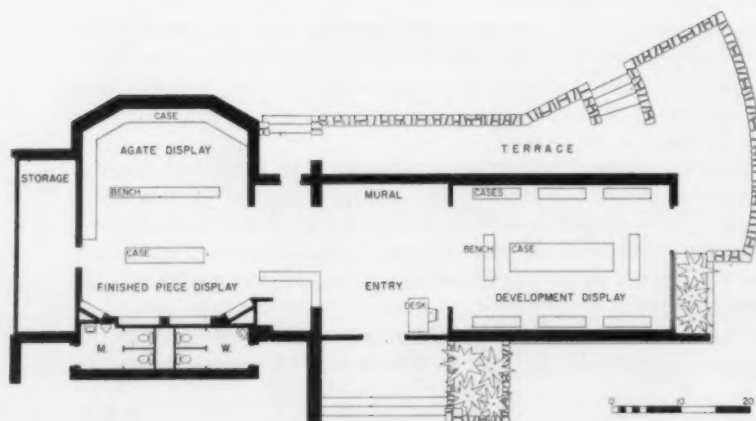
Newspapers know the Institute's position on advertising by individual architectural firms, and some respect it. But others do not and they raise the question whenever they can. Only architects themselves can answer them. Just recently a newsman, urging some form of advertising as a "starter," said, "Once you get in and advertise on one level, you'll be surprised how easy it is to follow through on individual advertising!"

Is this what the newspapers say to scientists, to doctors, to lawyers? Is this the pressure on modern professionals? If it is, architecture's answer must be firm and *united*.

E.K.T.



A MUSEUM IN A PETRIFIED FOREST



GINKGO MUSEUM, situated on a high, barren cliff overlooking the Columbia River and the town of Vantage, Wash., is designed to display rare and beautiful examples of petrified wood from an ancient forest, geological specimens and Indian relics from the surrounding region. Built by the Washington State Parks and Recreation Commission as an addition to an existing structure erected years ago under the CCC program, the museum will eventually be completed as a U-shaped structure with an almost-enclosed court containing an outdoor petrified wood exhibition.

The native stone used in the present building for fences, parapets and plant boxes relates the building to its site not only in texture — rough and strong — but in color — purple-black, dark red and brown — as well. **Architects:** D. M. Sibold, R. B. Price, C. L. Baker.

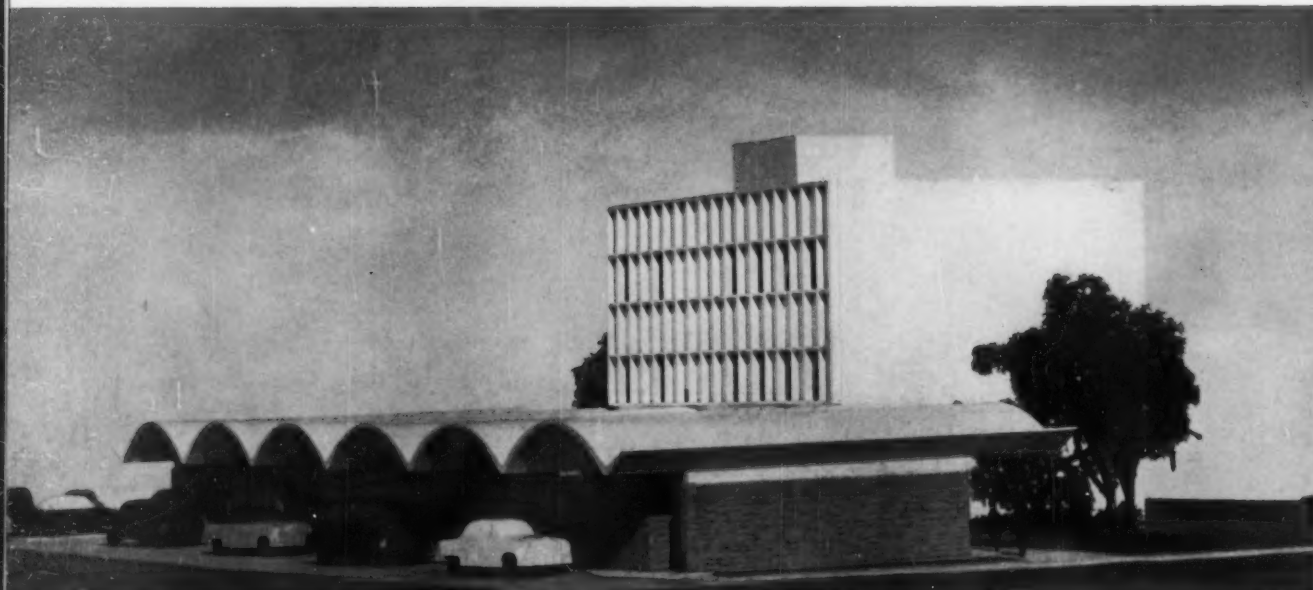
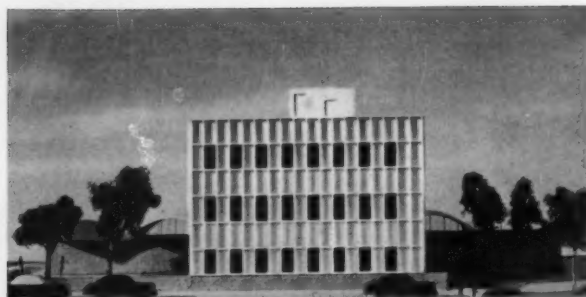


Colored relief carvings in oak boards of door are by Lionel Pries. Mural opposite entrance is by Sarah Spurgeon. Site, almost prehistoric in its arid desolation, overlooks magnificent view of Columbia River flanked by its dark, lava rock buttes; south end of development display room opens to view. Fragments of multi-colored petrified trees surround museum

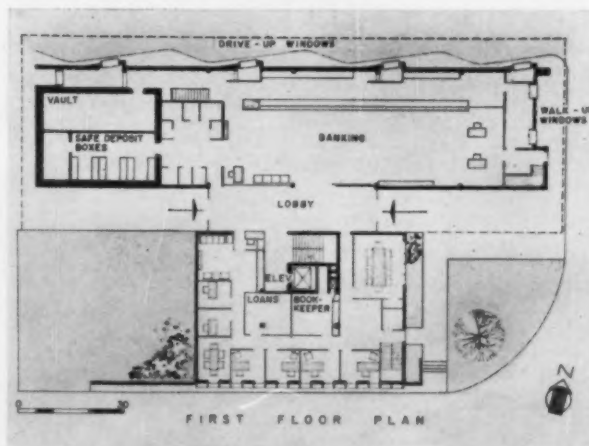
Art Hupy



TWO-UNIT BUILDING SEPARATES BANK FUNCTIONS



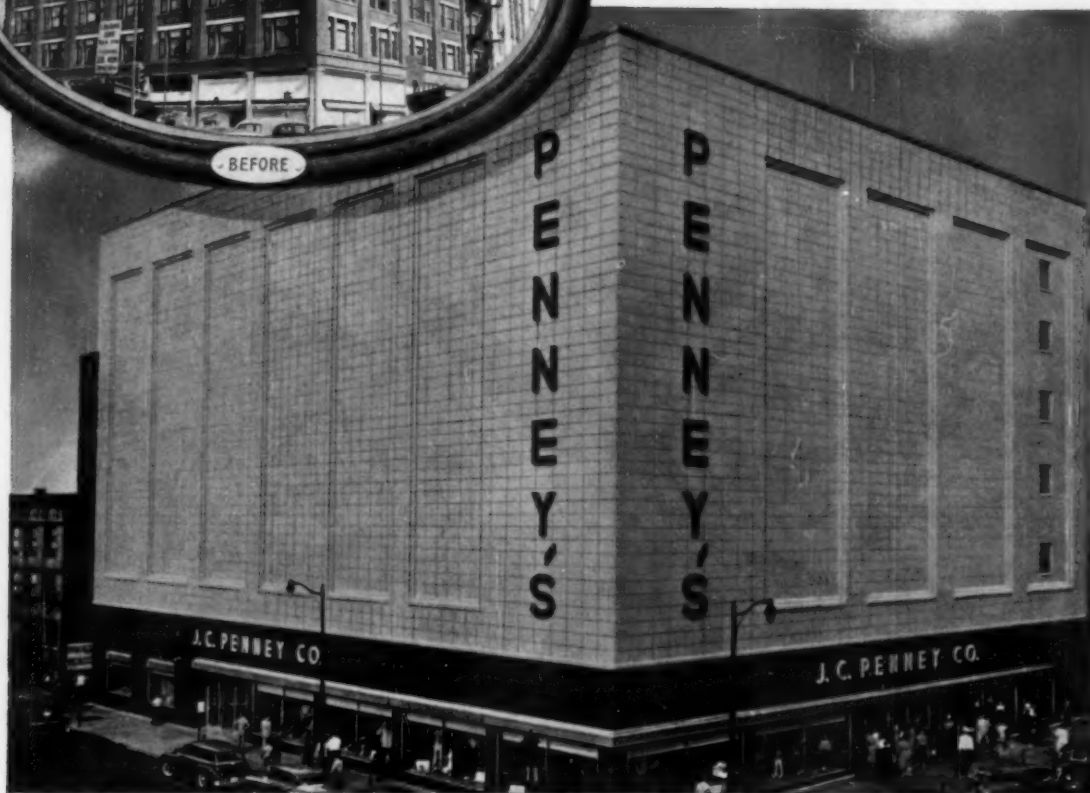
EACH SECTION of the new building for the First National Bank, now under construction in Boulder, Colo., provides for a different kind of banking operation. The single-story, shell-roofed section makes readily accessible all of the facilities most frequently used by the public: safe deposit boxes and booths, paying and receiving windows, both inside in the large column-free banking room and outside where wickets provide for deposits by motorists and by pedestrians. Offices for more private transactions—loans of various types, trust and installment handling—and executive offices are located in the three-story section which is joined to the banking room by a common lobby. The concrete shell roof, an unconservative approach to a structure for a notably conservative type of institution, was enthusiastically received by the bank's officers as an answer to their need for banking space free of columns and as complement in structure and texture to the rough native sandstone used on the walls. **Architect: Hobart D. Wagener; structural engineers: Ketchum and Konkell.**



NEW LEASE ON LIFE!

*another improvement program
aided by versatile*

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J. C. Penney Store Building, Spokane, Washington • Architects: Whitehouse & Price • Contractor & Structural Engineer: Walter G. Meyers & Son

LOCATION VALUE. Improvement programs like this downtown shopping corner are attracting attention throughout the country. If you have location assets—"what to do now" is vitally important to the future of your business. Managements at this decision level have found it helpful to study the profit potentials of remodeling with Ceramic Veneer.

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more, with the Prestige Package.
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These familiar customer-pleasers:



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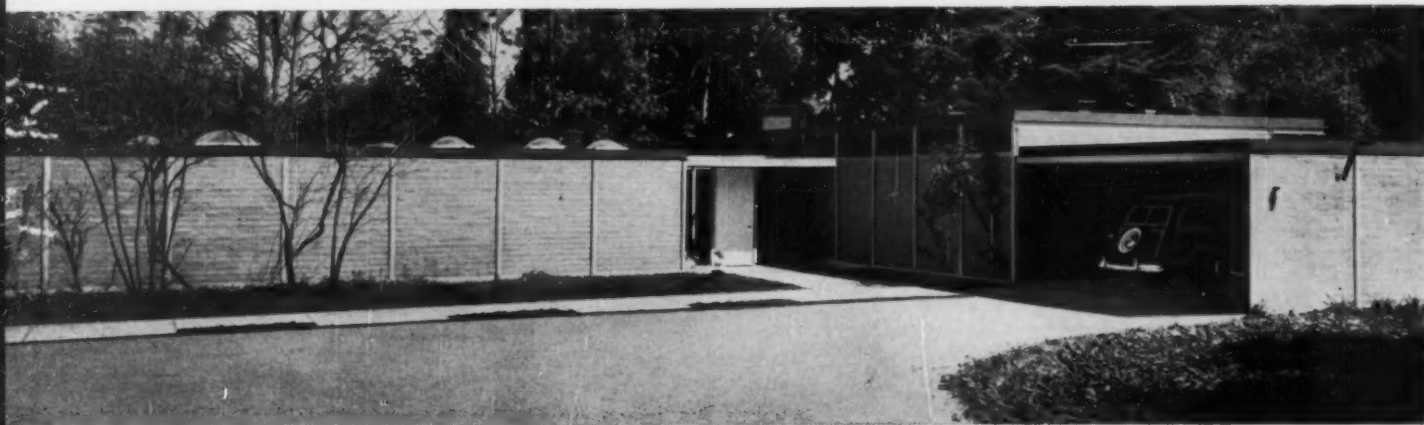
Overhead Bathroom
Heater & Light



CONTRACT DIVISION

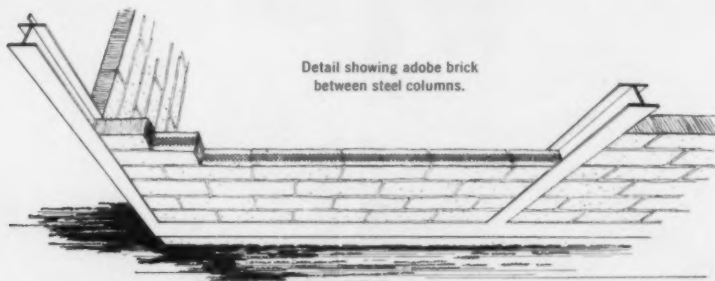
**UTILITY APPLIANCE CORP.
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The speed and ease of steel construction was an important plus-factor since the home was built during the heavy winter rains of 1955-56. Steel framing members were welded together at the plant and delivered to the site where San Jose Steel Co., Inc., erected the complete steel frame in just two days. The roof was placed during the third day and interior work continued uninterrupted by outside conditions.

This Atherton, California, home combines the native qualities of both steel and adobe brick—the strength and versatility of steel and the insulating ability of adobe. The owner has a home that is attractive, permanent, fire and termite resistive, and requires the barest minimum of upkeep. Construction cost, in 1955, was \$11.34 per square foot of living area. The home is arranged in a bi-nuclear design with living and sleeping quarters separated by a glass entry.



Detail showing adobe brick between steel columns.

The adobe bricks, $3\frac{1}{2}'' \times 4'' \times 16''$, were fitted directly into the H-section steel columns. Expanded metal lath was used on every other course of brick to give greater rigidity to the wall. Since the adobe bricks formed non-bearing walls, only a single rather than the usual double course of brick was required. United States Steel vertical columns used were 4"H13#; horizontal beams were 6"WF15.5#. The module was 6 feet, 9 inches.

ARCHITECTS & ENGINEERS: Write for your free copy of "New Horizons for Home Building...With Steel." This new booklet contains case histories of architect-designed steel homes and information on building codes, specification data and advice on the maintenance and painting of steel. Write: Architects & Engineers Service, Room 1260, United States Steel Corporation, Columbia-Geneva Steel Division, 120 Montgomery Street, San Francisco 6.

*News of another steel home
from United States Steel*

Teaching old materials new tricks...with steel

The use of adobe brick, one of the oldest home building materials, and steel, one of the newest, combine in this house to achieve a new level of originality in residential architecture.

This unique combination of adobe and steel resulted in both artistic and practical advantages. Unrestricted by conventional building methods, this 3,474 square-foot home is designed for indoor-outdoor integration and maximum design flexibility.



The United States Steel shapes used in this home are sold by steel jobbers in your locality.

*Designer: Don Knorr,
Knorr Associates, San Francisco*

*Engineer: John Brown,
San Francisco*

*Builder: Whelan Construction Co.
Redwood City*

Constructed as a speculative home, steel gave the contractor the rare opportunity of building the house so that it was adaptable to the demands of the buyer. Steel framing eliminates the need for load-bearing walls, which allows the new owner to adapt the interior to his individual needs. Walls in steel-frame homes can be free-standing storage cabinets or even drapes can be used to divide interior space.

Western homes of the future are now building with steel... UNITED STATES STEEL

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add rich beauty with masonry for half the cost of ordinary stone.
Specify the most economical luxury in distinctive building products:
FLAGCRETE, TERRACRETE, SLUMPSTONE, ROMANCRETE, ELDORADO SLUMPSTONE.
Dramatic textures and colors. Easily installed inside or outside.
See your masonry supply dealer or write for information.

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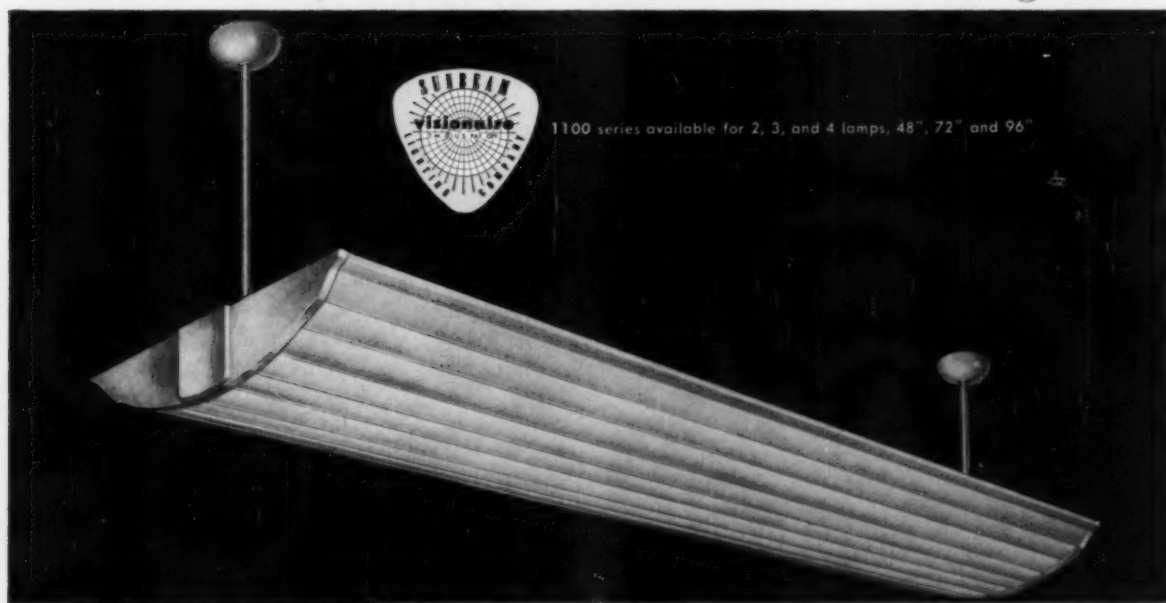
Wm. Bray, AIA, Architect

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READ HOW EASY it is to perform difficult visual tasks with the new, totally indirect Sunbeam Lighting 1100 series. The unusually broad distribution of uniform, glare-less, low brightness, high intensity illumination produced by this pendant Visionaire establishes new concepts of visual comfort. With its soft, eye-easy, luminous effect and clean-lined beauty, this **all-white** unit is perfectly designed for schoolrooms, offices, drafting rooms and other areas where the seeing task is critical.

Consider also the long-range savings available with this **all-metal**, low maintenance Visionaire. Parallel metal louvers allow circulating air currents to keep louver and lamp surfaces dust free. After mounting easy-to-handle fixture frame by "hook-on" method, the shielding cradle



hinges into place without tools for quick installation. The 1100 series relamps from the top without removing any part of fixture. Units available for use with higher lumen lamps, typical of today's trend. All metal parts are Bonderite-treated for lifetime corrosion resistance. Write for Bulletin 747 today.

Sunbeam Lighting Co., 777 E. 14th Pl., Los Angeles 21, Calif.

DESIGNER CRAFTSMEN OF THE WEST, 1957

SCREENED REGIONALLY before the jury judgment, the submissions from five Western states to this year's Designer Craftsmen show at San Francisco's De Young Museum make an interesting commentary on the state of design in the West, in this segment of the field at least. Of the several hundred entries for the show, less than half were retained for exhibition, and of these only 23 received awards and mentions.

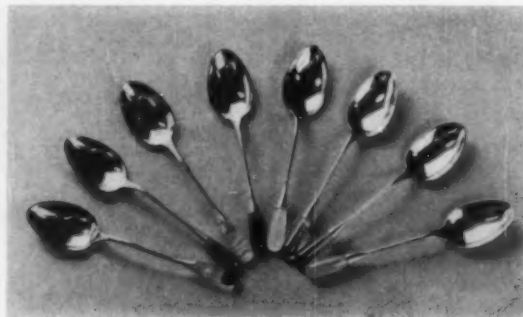
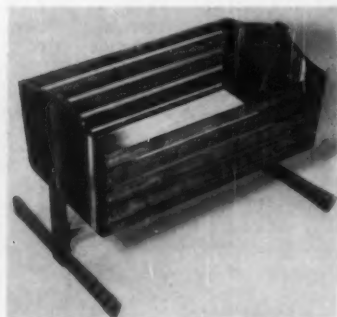
Such strict selection is not only a tribute to a conscientious jury which insisted on quality but to the artists and craftsmen of the premiated entries. The jury — all Westerners: Hal Painter, Merry Renk, Herbert Sanders, Herwin Schaefer and Rudolph Shaeffer — set as their criteria workmanship "which makes no fetish of crudeness nor virtue of sloppiness"; materials, "flawless and genuine, enhanced and their beauty revealed rather than spoiled by the craftsman's work"; "purpose, use or meaning in the object, not mere caprice, whimsy or fashion"; and "creativity, sensitivity and mastery of form, not novelty, experimentation or reliance on the fortuitous accident."

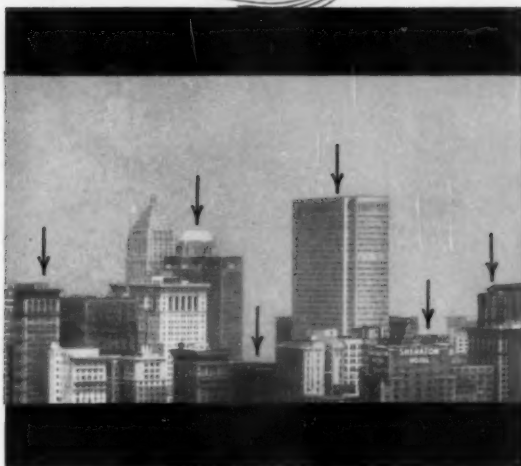
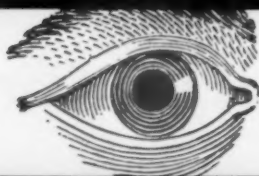
Ceramics, printed textiles and handweaving make up the bulk of the show. Objects on display until July 31 were designed for use in interior design as well as examples of craft media and, in the case of the textiles and weaving, for fashion.



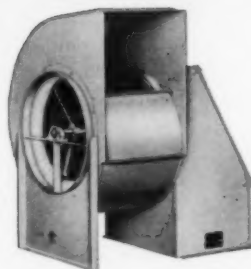
William Henry Marshall

"San Francisco Room," designed by John Carden Campbell of Campbell & Wong, shows living area and garden furnished with work by Bay Area artists and craftsmen: ceramic fireplace, Edith Heath; couch and table, Arthur Hanna; upholstery, Rosalind Ray Watkin and Zamma Zethraus; painting, Joel Barletta. Below, left to right: cradle, John A. Kapel; earthenware pot, Madeline Cortese; coffee spoons, Francis J. Sperisen. Last two won awards for workmanship, material use, meaning, creativity





A NEW LOOK AT "THE FORGOTTEN FAN"



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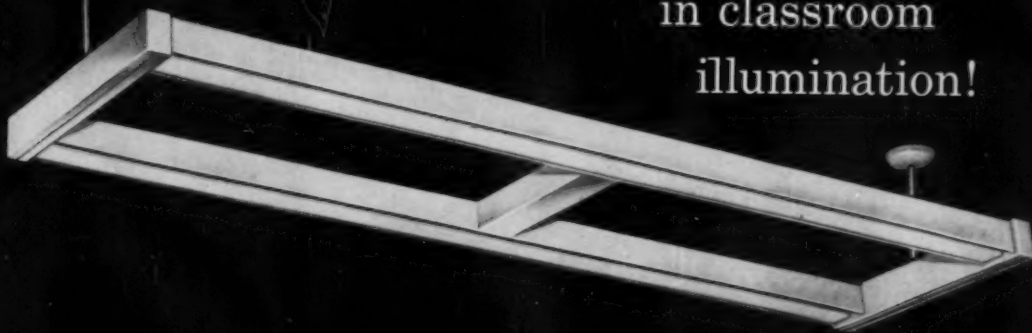
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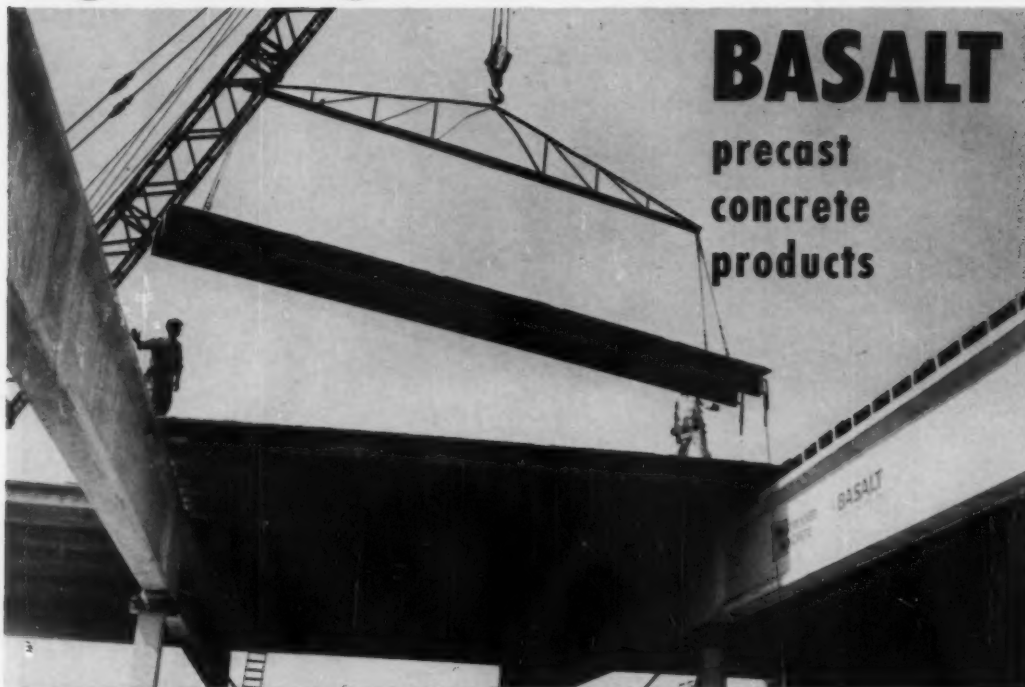
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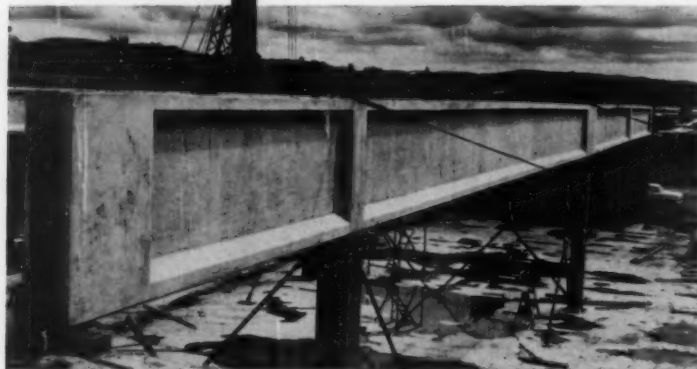
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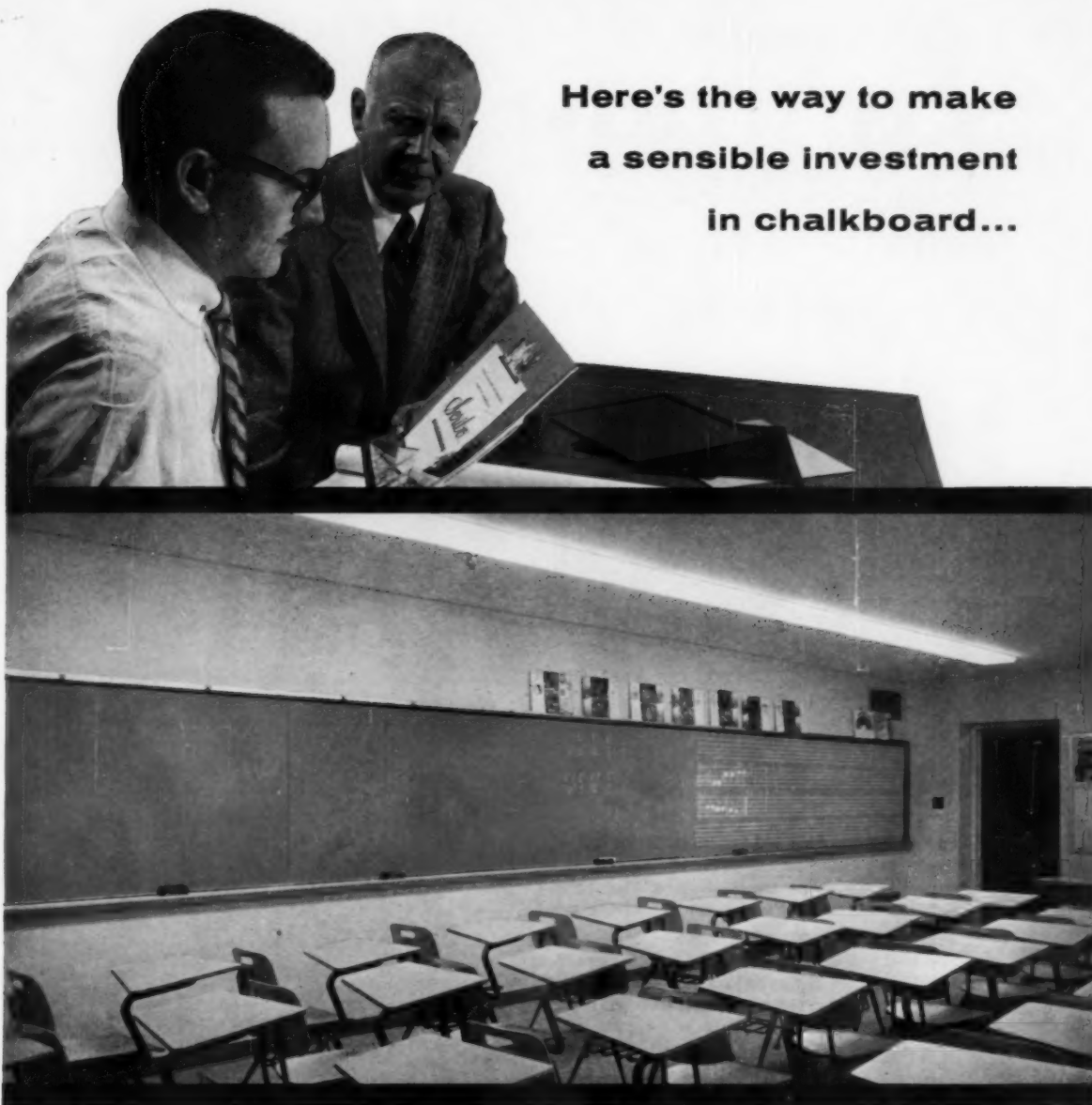


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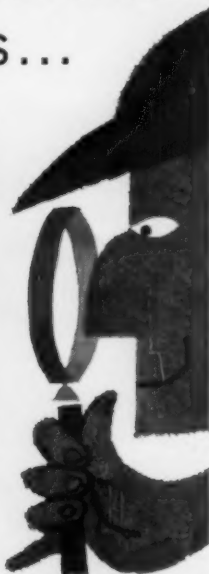
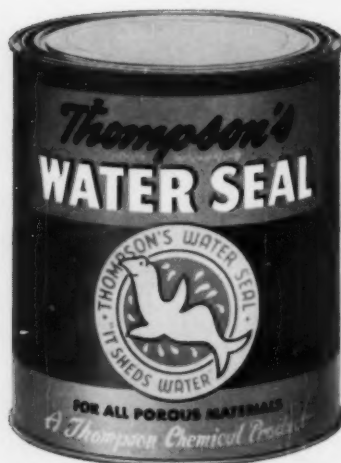
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No Practice Act This Year

The high hopes with which California architects viewed the opening of this year's legislature were dashed by session's end: the bill which would have redefined the practice of architecture in the state and brought its requirements more into line with the present engineers' act was tabled.

During the legislature's five-month session, the bill had its bright moments. After successfully weathering three hearings in the Assembly, it was unanimously passed. But in the Senate it got no farther than the Business and Professions Committee.

Although endorsed by almost all representatives of the building industry in the state, the bill was strenuously opposed by two groups, the United Designers Association and the Southern California Building Contractors Association, whose arguments — that the bill would restrict the unlicensed designer even more than the present act does — impressed the senators with greater force than did the architects'.

The legislative record did, however, chalk up one hit for architects. The bills which proposed a sliding fee for design of public buildings by architects, made permissive the engaging of an architect on school work and set a flat five per cent fee for school work, were all killed in committee.

A City Asks for Beauty

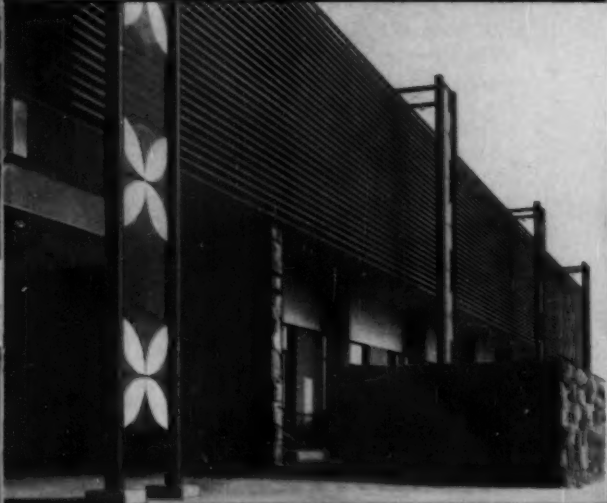
A year ago San Francisco voted \$19,000,000 worth of bonds to build a new Hall of Justice and selected architects Weihe, Frick and Kruse to design it. According to the city's charge to the architects, it was to be a "plain, usable building."

When the first sketch of the building was released late in May, reaction was immediate. Some felt that the building as designed would not only meet practical requirements but would do so handsomely. But others, apparently in the majority, disagreed loudly.

City officials, urged by the mayor to "take a careful look" at the building, heard him state that the Hall of Justice should not be a "drab thing that would scare you to go in." Strongest defender of the design was Public Works Director Sherman Duckel, according to a news story in the *San Francisco Chronicle* which quoted him as saying it was "good functional design" and "suitable for the neighborhood in which it will be built."

(Continued on page 48-22)

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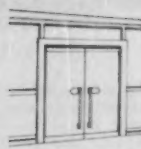
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THE METROPOLITAN WEST

(Continued from page 48-20)

One reason for the hubbub was that at the time the bond issue was being promoted, a sketch of a building was used to attract voters. The sketch, made by the office of the city architect, showed a building of very different character from the one designed by Weihe, Frick and Kruse on a site quite unlike that finally accepted for the building. The public, expecting one thing and apparently getting another, was confused.

In the meantime, the Art Commission — which had approved the first sketches submitted by the architects — was awaiting a model of the building which would define the concepts indicated in the sketches.

The building is to house administrative offices for ten law enforcement agencies — offices, courts, juvenile bureau, the city's legal officers, city prison, county jail, and police department.

Good News in Los Angeles

Two big problems in the West's largest city may be on the way to solution as a result of bond issues and a new law signed last month by Governor Knight. The two bond issues — a \$39,000,000 one for parks and recreation areas and a \$6,400,000 one for new library buildings — will provide facilities for the public's growing leisure time. Included in the parks program is a new \$6,600,000 zoological park in Chavez Ravine, once proposed as a site for a housing project to be designed by Richard Neutra.

The other problem — how to get the millions who live around Los Angeles as well as in it to and from their jobs, shopping and other activities — will be tackled by the board of the Metropolitan Transit Authority which will be set up under a new law. It will be empowered to buy the city's present public transit system and, when it has the funds to do so, to build the rapid transit system so sorely needed.

L. A. Skyscrapers Need Enabling Law

Although its residents voted last November to set aside Los Angeles' height limit restriction, the necessary amendment to the city's code has not yet been drawn up. As a result, construction of several tall buildings has been held up.

Meantime, the City Planning Commission is holding hearings to establish some districts as areas where buildings of unlimited height can be built and others as height limit areas.

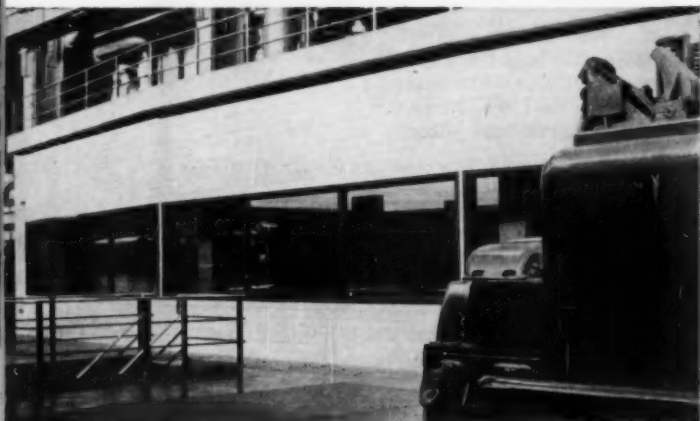
(Continued on page 48-24)



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A Site for S. F.'s Federal Building

The huge new office building which the U. S. government proposes to build in San Francisco — when, as and if the federal lease-purchase program is resumed — will be located on a site on Golden Gate Avenue between Larkin and Polk streets near the Civic Center. Although construction is temporarily deferred, funds for site acquisition are available, according to General Services Administration officials.

No architects had been selected for the \$45,000,000 project at the time the lease-purchase program was suspended.

WASHINGTON**GSA Proposes New Method**

Suspension of the lease-purchase program for construction of new public buildings put the government on a bad spot in some localities where inadequate and obsolete public buildings — post offices, especially — were said to be hampering federal services. In most instances, projects were "deferred." In some, new ways of making construction feasible were being sought.

One proposal, suggested in connection

with a new three-story post office in down-town Seattle, was recently made by General Services Administration. GSA offered to trade 110 ft of frontage next to the proposed building's site in exchange for construction of the post office building according to the government's specifications. The new building would cost an estimated \$800,000.

The successful bidder could conceivably use the site, acquired by trade, in any way he wanted. The possibility was, however, that the site would be used for construction of a parking garage which could be used in connection with a proposed new 20-story office building the University of Washington would like to build next to the 110-ft government owned lot.

Fair — but Warmer

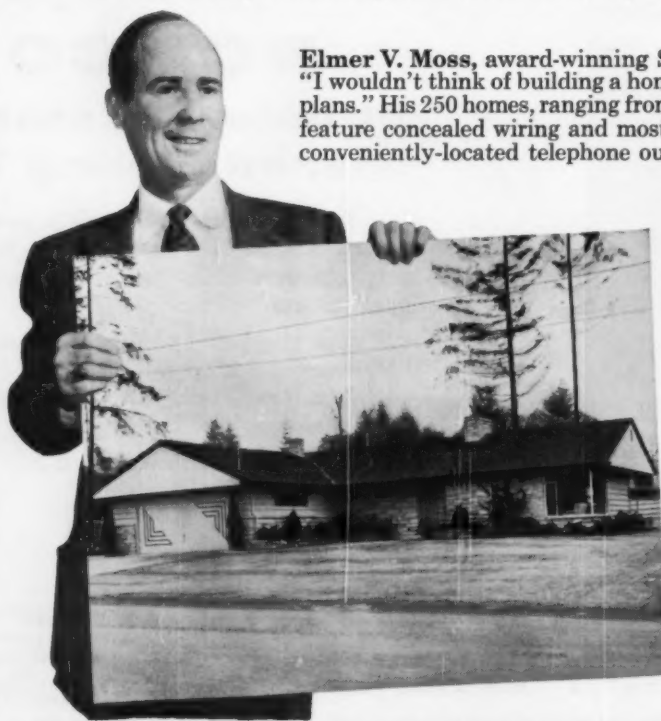
Seattle's world's fair — or Festival of the West, as it is being called — may be ready by its present target date (summer of 1960) but there seems to be some doubt that Seattle itself will be ready for the stream of visitors which a world's fair conjures up. The biggest reason for the doubt is that so far construction has not started on the Tacoma-

Seattle-Everett expressway, authorized by the state's last legislature.

The expressway route cuts right through the heart of Seattle's main business district. Since it is to be a full city block wide, the prospect of treating visitors to such a gaping hole is anything but alluring to the home town people, some of whom were none too enthusiastic about the expressway in any case.

The fair commission, however, is proceeding with its plans for opening in 1960, 50 years after the Alaska-Yukon exposition opened in the same city, and for continuing the fair during the summer and early fall months of the following year.

When Seattle last fall voted \$7,500,000 in bonds for a new civic center, the legislature matched these funds with state money for a fair to be held in the city's civic center, thus aiding the development of the civic center in more ways than one, and at the same time making the fair project feasible. Some of the fair buildings will become permanent civic center buildings; the fair needs a larger site than the civic center. To adjust these and other problems, the civic center advisory committee and the World's Fair Commission are working together.

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Elmer V. Moss, award-winning Seattle builder, says "I wouldn't think of building a home without telephone plans." His 250 homes, ranging from \$13,250 to \$30,000, feature concealed wiring and most of them have three conveniently-located telephone outlets.

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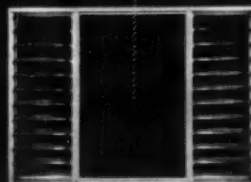
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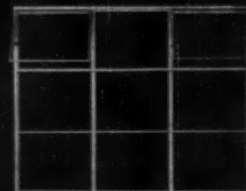
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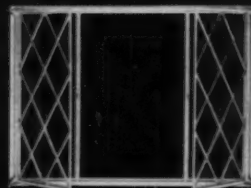
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Addenda: A Western Gumbo

Sir Hugh Casson, a British architect who visited San Francisco recently, came up with a suggestion for the harried people of San Francisco who daily see the progress of the freeway toward the front of the Ferry Building which it soon will obliterate.

Move it, said Sir Hugh. Let the freeway go where it inexorably is going to go. Just move the building to the other side of it. On second thought, he added: why bother with the whole building; why not just move the tower?

With freeways cutting across, through, over and maybe under our cities, this may be a factor to take into consideration in designing tomorrow's buildings. Buildings with parts that can be split off — and no harm done, like those necklaces with pop-off beads — could be the answer. But let's hope not.

An architect visiting the National Association of Architectural Metal Manufacturers' convention in San Francisco in May could have felt right at home in some of the discussions. If he had substituted "drafting room" when they used "shop" and "design" when they used "service," and realized that when they said "client" they meant the architect — he would have found that NAAMM members have what are, essentially, the same problems he has.

At one of the division meetings the chairman, reporting on the year's activity, said: "We bandy words like 'efficiency' and 'profitable' without any idea of how to realize them." If misery loves company, that should make us feel well companioned.

May was the month for meetings. The American Nuclear Society — a national organization of nuclear scientists and engineers whose objective is to "advance nuclear science and allied arts and sciences" — held a branch section meeting at the dedication of General Electric's new Vallecitos Laboratory near Pleasanton, Calif. Not only were such mysterious things as neutron fluxes discussed, but representatives of the rapidly expanding nuclear industry in the San Francisco Bay Area described progress in design of power reactors and showed details of each of the types the various companies are working on.

The interesting thing was that nobody seemed to be interested in copying what another company had done; the free

interchange of information was, rather, a stimulus to design a better reactor. Talk about sermons in stones! There are, apparently, morals in scam rods.

Why do some builders shy from contemporary design and prefer to build the so-called "fairy-tale" house, complete with wishing-well in the front yard (even if the back half of the roof is surfaced with composition shingles while the front boasts wood shakes)?

Well, there must be reasons, but the most volubly expressed is that that's what the public wants. How do they know that's what the public wants? With a triumphant gleam, they'll tell you: that's what the public buys. You could argue till you turned blue that the public's pocketbook had more to do with it than the wishing well or the scalloped fringe along the eaves. But you wouldn't shift their conviction that the public buys what it wants, not what it can afford.

Two things stood out at a recent meeting of the Young Home Builders Council in Los Angeles. One was that the builder is a victim of the layman's fault of thinking in details — the "dropped" ceiling, the built-in planter, the Mr. and Mrs. medicine cabinets, all the array of gimmicks and tricks — and not of the overall design. He's thinking of talking points, not of the sum total in living experience that the house he builds will represent. And he has to have talking points that he understands because he has to make sales. He understands these details; he's lost with the intangibles of which architects talk.

The other point that the meeting brought out was heartening. The architect isn't so completely ignored in the builder's thinking as he thinks he is. But the architect isn't very well known among builders. He can't expect them to know him if he doesn't know them.

Errors and Omissions

"A long range plan, showing the most functional and athletic blending of buildings and open space in an 83-acre site" reads the *Seattle Times*' description of the status of planning for the city's new civic center.

"Athletic blending" is the one factor that's been missing in contemporary architecture. Maybe the gulf between function and *aesthetics* is wider than we thought.

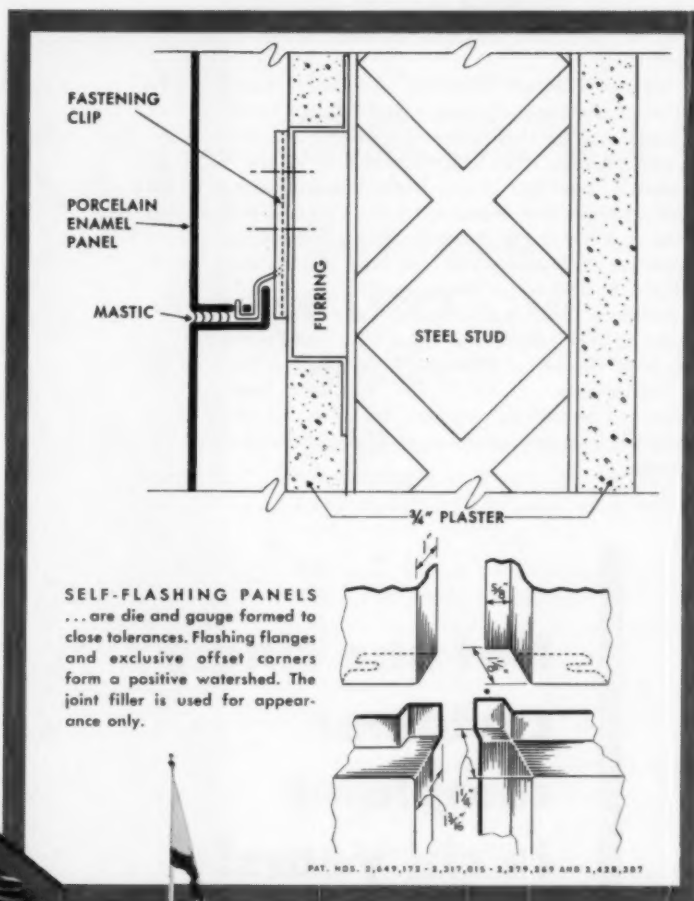
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PROFESSIONAL NEWS

Western Architects Plan Annual Conventions

Architects of the Western Mountain Region, A.I.A., will meet this year at Jackson Lake Lodge, Jackson Lake, Wyo., September 5-7 for their annual regional conference. Theme of the conference is "Nature in Architecture." Speakers invited to participate in the program include John Knox Shear, *RECORD* editor in chief; Carlos Contreras, Mexican architect and planner; Milton Horne; and Leon Chatelain, A.I.A. national president. Robert Wehrli, Wyoming chapter president, is convention chairman; Bradley Kidder is regional director.

"Design Through Structure" has been chosen as the theme of one panel discussion, and "Urban Development" of another, at the twelfth annual convention of the California Council, A.I.A. to be held October 2-6 at the Hotel del Coronado, near San Diego. Wallace Bonsall is convention advisory committee chairman; Ulysses Floyd Rible is regional director. A meeting of the regional council (comprising representatives of all chapters in California, Nevada and Hawaii) will also be held during the convention.

Architects Jose Luis Sert, Francis Joseph McCarthy, Henry Hill and editors John Knox Shear and Thomas Creighton head the list of speakers on "Expanding the Practice of Architecture," theme of the Northwest Regional conference to be held in Gearhart, Ore., October 17-20. John Dukehart is conference chairman; Donald Stewart is regional director.

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CALENDAR OF WESTERN EVENTS

- July 8-10: American Society of Landscape Architects, 58th annual meeting, Sheraton-Palace Hotel, San Francisco
- To July 28: Landscape Architecture 1958, San Francisco Museum of Art
- To July 31: "Designer-Craftsmen of the West, 1957," juried exhibition, M. H. DeYoung Memorial Museum, Golden Gate Park, San Francisco
- July 29-August 2: World Conference on Prestressed Concrete, University of California, Extension Division, and Prestressed Concrete Institute, Fairmont Hotel, San Francisco
- September 5-7: Western Mountain Region Conference, Jackson Lake Lodge, Jackson Hole, Wyo.
- October 2-6: California Council, A.I.A., annual convention, and California-Nevada-Hawaii Regional Council, Hotel del Coronado, Coronado, Calif.
- October 17-20: Northwest Region, A.I.A., annual conference, Gearhart, Ore.
- October 17-20: California Council of Landscape Architects annual convention, Mark Thomas Inn, Monterey, Calif.
- October 31-November 2: Structural Engineers Association of California annual convention, Hotel del Coronado, Calif.

WESTERN SECTION

INDEX TO ADVERTISING

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*An L-O-F interview with
R. C. Daly, President,
GEORGE A. FULLER CO.*

Subject: CURTAIN WALLS

Question: Out of your extensive experience constructing thin, lightweight curtain walls, what would you say are their principal benefits to the building owner?

Mr. Daly: First of all, additional floor space. The thinner skin on the exterior makes it possible to deliver more actual square feet of floor space around the perimeter.

Second, the lighter weight skin means saving weight in the structural skeleton. Hence, a saving in money.

Third, the large window areas in modern curtain walls give greater exposure . . . more daylight and vision, less sense of confinement. Offices feel larger.

Finally, the curtain wall building has a modern look that people like and owners feel proud of. Yet the buildings needn't look the same. Architects come up with pleasing variations in design by use of different kinds of skin materials, by use of color and texture and by variations in emphasis of lines, horizontal and vertical.

Question: Would you say, then, that a curtain wall building delivers more floor space, actually and psychologically, for less money?

Mr. Daly: Not necessarily for less money. It can mean a less expensive building for a

Virtually continuous windows in aluminum and steel curtain walls are glazed with L-O-F Thermopane insulating glass and plate glass. Mile High Center, Denver — Architects: I. M. Pei & Associates (Webb & Knapp); General Contractor: George A. Fuller Co.; Photograph by Ezra Stoller.

**L
O
F
GLASS**

Blue-green curtain walls, combining Thermopane with an outer light of Heat Absorbing Plate Glass in the windows and darker blue-green porcelain enameled panels, blend into the wooded, rolling site of Wyeth Laboratories, Inc., Radnor, Pa. Architects: Skidmore, Owings & Merrill; General Contractor: George A. Fuller Co.; Photo by Ezra Stoller.



given amount of floor space, but the skin materials chosen for aesthetic reasons may obviate the possible economy. To go to the extreme, gold spandrels would mean a very costly building.

Psychologically, curtain walls with large windows and low convectors beneath them make complete sense. Offices used to be built larger than they actually needed to be, to create the feeling of spaciousness. More windows with less floor space would have made them feel just as big.

Furthermore, an office like this is inflexible. Floor space is difficult to redivide when you have wide piers between windows. With virtually continuous modular windows, interior partitions can be more easily changed at every 4' 2" interval.

Question: Would you care to say what the average cost of a curtain wall building runs today, per square foot of floor space?

Mr. Daly: In the first place, costs obviously will vary widely with locality and site conditions. But one could say that a representative income rental building of average proportions, in the 20 to 30-story class, ranges from \$20 to \$26 per square foot gross — without allowances for interior changes by tenants, financing costs and other variables.

But let me say, also, that if anyone were thinking of initial cost only, there wouldn't be many so-called metal-and-glass-clad buildings. Masonry and small windows would be cheaper in initial cost, cheaper to air condition. But the appeal of such a building doesn't compare with skin-type construction having big windows which give occupants a greater sense of spaciousness, more daylight, a wide view, a modern feeling. These things, plus the flexibility of interior partitioning and modular efficiency, outweigh the initial cost consideration.

Question: In what ways have curtain wall materials and erection methods been improved in recent years?

Mr. Daly: Many ways. Big advances have been made in the manner of treating expansion and contraction of skin materials, of flashing spandrels to take care of minor leakages that were one of the growing pains. Excellent elastic-type calking compounds and long-life gasketing have been developed.

Another great advance lies in test-laboratory facilities that permit subjecting full-scale wall sections to rain and to wind pressures of 120 miles per hour to determine, in advance, their ability to withstand weather extremes of all kinds. Thus, we can modify them to correct faults.

Question: What has been your experience with glass as a spandrel or facing material?

Mr. Daly: We love it. Glass is not only less expensive than most other curtain wall materials, but also a very practical and satisfactory material to erect. We have seen no indication of fatigue in glass facings. No cracking. It is second to none when it comes





to weathering and is pretty much self-cleaning—at most, just a window wash job. Color permanence is no problem with glass spandrels as made today with fused ceramic enamels on the back. And we can erect glass more rapidly.

Question: Are there any other advantages of curtain wall construction, from the general contractor's viewpoint, that you would like to mention?

Mr. Daly: The reduction of wet construction is one. That means earlier completion of interior trades because they don't have to wait so long for drying out. Also, curtain walls go up faster, especially glass or metal skins. Erection crews can start later and yet wind up the job at the same time that masons would finish. In general, there is more rapid turnover of labor and materials. Less time is spent on the job by the different trades. And the nonporous facings, especially glass, speed cleanup after completion.

Question: What do you foresee for curtain wall construction in the next five years?

Mr. Daly: Because it has such great appeal to owners and occupants and is economically sound, the curtain wall trend will definitely continue. There will be an even higher percentage of this type of building constructed in the next five years.

Curtain walls will be improved further and become even more economical as a result of technological improvements and manufacturing economies that are even now being developed by material suppliers . . . by manufacturers of facing materials, structural members for attachment, calking and gasketing, back-up materials and the glass for windows.

Hotel Statler, Hartford, Conn., (a Hilton Hotel) is another modern curtain wall structure glazed with L-O-F products. Architect: William Tabler; General Contractor: George A. Fuller Co.; Photograph by Don Morgan.

L·O·F GLASS FOR CURTAIN WALLS



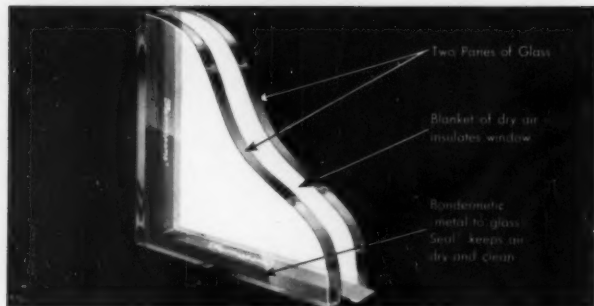
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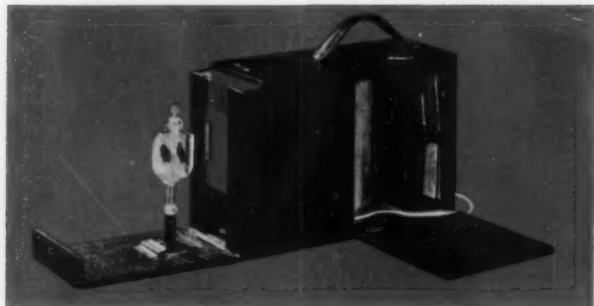
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THE RECORD REPORTS: CONSTRUCTION COST INDEXES

Labor and Materials

U. S. average 1926-1929 = 100

Presented by Clyde Shule, manager, Statistical and Research Division, F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assoc., Inc.

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Period	Residential		Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Concr.		Residential	Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Steel	
	Brick	Frame		Brick	Steel			Brick	Steel
1930	127.0	126.7	124.1	128.0	123.6	82.1	80.9	84.5	83.6
1935	93.8	91.3	104.7	108.5	105.5	72.3	67.9	84.0	85.1
1939	123.5	122.4	130.7	133.4	130.1	86.3	83.1	95.1	94.7
1946	181.8	182.4	177.2	179.0	174.8	148.1	149.2	136.8	135.1
1947	219.3	222.0	207.6	207.5	203.8	180.4	184.0	158.1	158.0
1948	250.1	251.6	239.4	242.2	235.6	199.2	202.5	178.8	178.8
1949	243.7	240.8	242.8	246.4	240.0	189.3	189.9	180.6	177.5
1950	256.2	254.5	249.5	251.5	248.0	194.3	196.2	185.4	185.0
1951	273.2	271.3	263.7	265.2	262.2	212.8	214.6	204.2	205.0
1952	278.2	274.8	271.9	274.9	271.8	218.8	221.0	212.8	214.3
1953	281.3	277.2	281.0	286.0	282.0	223.3	224.6	221.3	223.0
1954	285.0	278.2	293.0	300.6	295.4	219.6	219.1	223.5	225.4
1955	293.1	286.0	300.0	308.3	302.4	225.3	225.1	229.0	231.8
1956	310.8	302.2	320.1	328.6	324.5	237.2	235.7	241.7	244.4
Feb. 1957	316.5	306.5	329.5	341.2	335.1	239.8	238.1	245.7	250.8
Mar. 1957	316.5	306.5	329.5	341.2	335.1	239.8	238.1	245.7	250.8
Apr. 1957	316.5	306.5	329.8	341.8	335.4	239.4	237.7	245.2	250.4
% increase over 1939									
Apr. 1957	156.3	150.4	152.2	156.2	157.8	177.4	186.0	157.8	154.9

ST. LOUIS

SAN FRANCISCO

1930	108.9	108.3	112.4	115.3	111.3	90.8	86.8	100.4	104.9	100.4
1935	95.1	90.1	104.1	108.3	105.4	89.5	84.5	96.4	103.7	99.7
1939	110.2	107.0	118.7	119.8	119.0	105.6	99.3	117.4	121.9	116.5
1946	167.1	167.4	159.1	161.1	158.1	159.7	157.5	157.9	159.3	160.0
1947	202.4	203.8	183.9	184.2	184.0	193.1	191.6	183.7	186.8	186.9
1948	227.9	231.2	207.7	210.0	208.1	218.9	216.6	208.3	214.7	211.1
1949	221.4	220.7	212.8	215.7	213.6	213.0	207.1	214.0	219.8	216.1
1950	232.8	230.7	221.9	225.3	222.8	227.0	223.1	222.4	224.5	222.6
1951	252.0	248.3	238.5	240.9	239.0	245.2	240.4	239.6	243.1	243.1
1952	259.1	253.2	249.7	255.0	249.6	250.2	245.0	245.6	248.7	249.6
1953	263.4	256.4	259.0	267.6	259.2	255.2	257.2	256.6	261.0	259.7
1954	266.6	260.2	263.7	273.3	266.2	257.4	249.2	264.1	272.5	267.2
1955	273.3	266.5	272.2	281.3	276.5	268.0	259.6	275.0	284.4	279.6
1956	288.7	280.3	287.9	299.2	293.3	279.0	270.0	288.9	298.6	295.8
Feb. 1957	289.7	281.1	291.0	302.6	297.2	283.1	272.4	296.9	307.4	303.4
Mar. 1957	289.0	280.8	290.6	302.2	296.7	283.1	272.4	296.9	307.4	303.4
Apr. 1957	288.6	280.4	290.1	301.8	296.3	283.5	272.8	297.7	308.4	303.8
% increase over 1939										
Apr. 1957	161.9	162.1	144.4	151.9	149.0	168.5	174.7	153.6	153.0	160.8

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:
 index for city A = 110
 index for city B = 95
 (both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in A.

$$\frac{110-95}{110} = 0.136$$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926-29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

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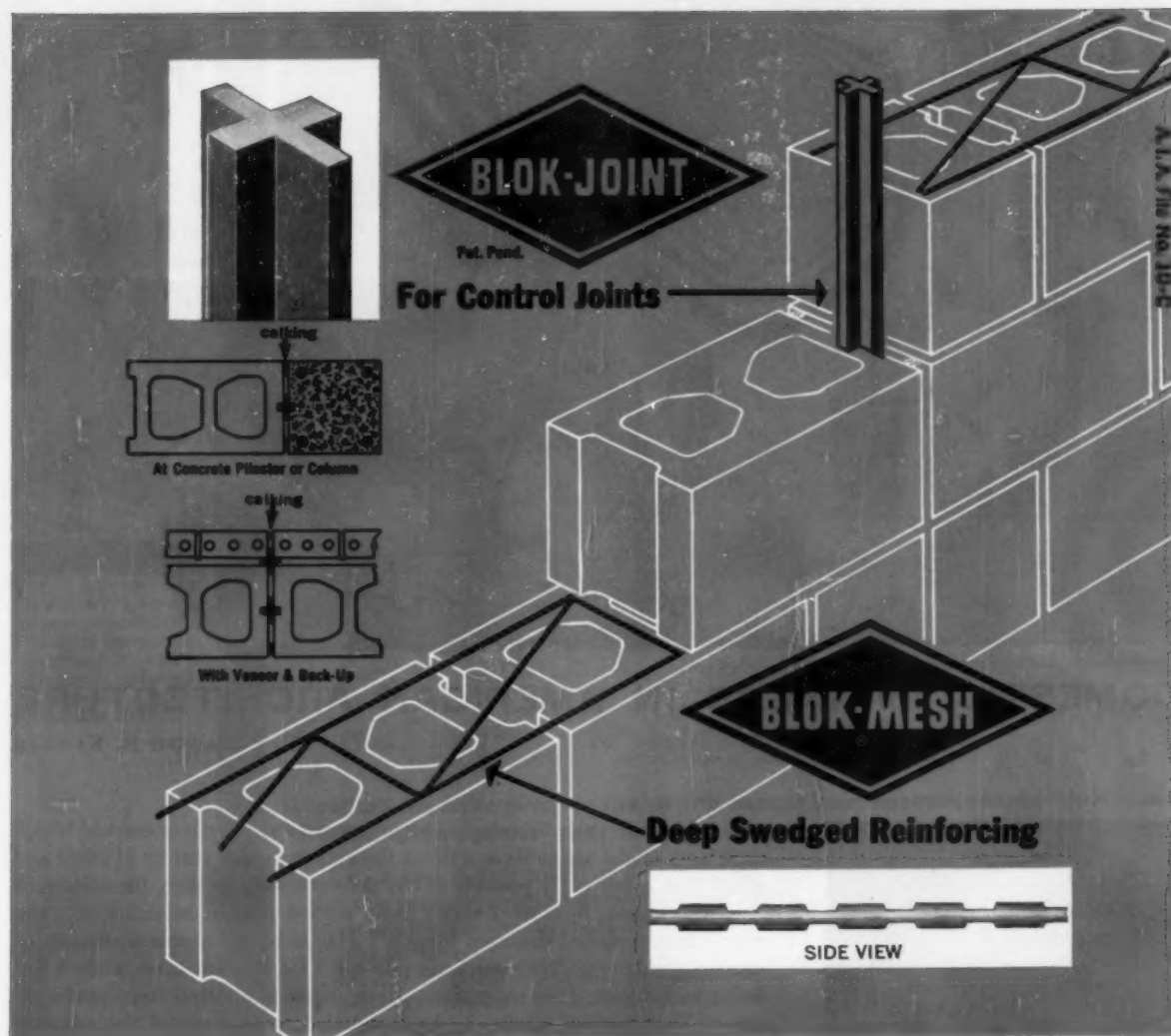
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Record Houses of 1957. By the editors of ARCHITECTURAL RECORD. F. W. Dodge Corp. (N. Y.), 1957. 286 pp., 268 photographs, plans and drawings. Preface by Russell Lynes

"... high and superb and all-of-a-piece"

Philip Johnson, Architect



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DOMESTIC MANNERS IN AMERICAN ARCHITECTURE

By ELIZABETH B. KASSLER

George Matsumoto, Architect



Joseph W. Molitor



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Eliot Noyes, Architect

Fired by the idea of producing an inexpensive paper-cover manual which architects might use to show a client the extraordinary variety of cause and effect that is currently possible in our domestic architecture, the editors of ARCHITECTURAL RECORD present their second annual selection of "the year's best architect-designed houses." This is by no means a reprint, as most of the twenty-five houses are published for the first time, while a few came to light in other magazines. Each house is allotted four handsome pages. This section is followed by a detailed comparison of the separate design elements (entrances, built-ins, terraces, etc.) and prefaced with a lively article on "The American at Home — 1957" by Russell Lynes, student of the American scene and managing editor of *Harper's*.

It is a happy circumstance that the astute and witty Mr. Lynes extends his trollopian concern for the domestic manners of the Americans to the houses which embody them. He takes as a text a quotation from the doughty 19th century phrenologist-octagonalist, Orson Squire Fowler: "Beautiful birds build tasty nests . . . a fancy man will build a fancy cottage, a practical man, a convenient house; a substantial man, a solid edifice; a weak man, an illy arranged house; an aspiring man, a high house, and a superior man, a superb villa." Anyone interested in architecture as a social art must hope that the sequence is also reversible — that high houses and superb villas will nurture an aspiring and superior breed of man as surely as the beautiful bird must issue from a tasty nest. Or was Fowler faulty in his ornithological premises, we in our sociological?

Some of these Record Houses (George Matsumoto's, for instance, and Philip Johnson's) are indeed high and superb and all-of-a-piece. Others might themselves be characterized as tasty nests, with here some lovely golden straws or twisted twigs, there a borrowed feather or a chic bright ribbon, and nothing much to hold the ingredients together as architecture.

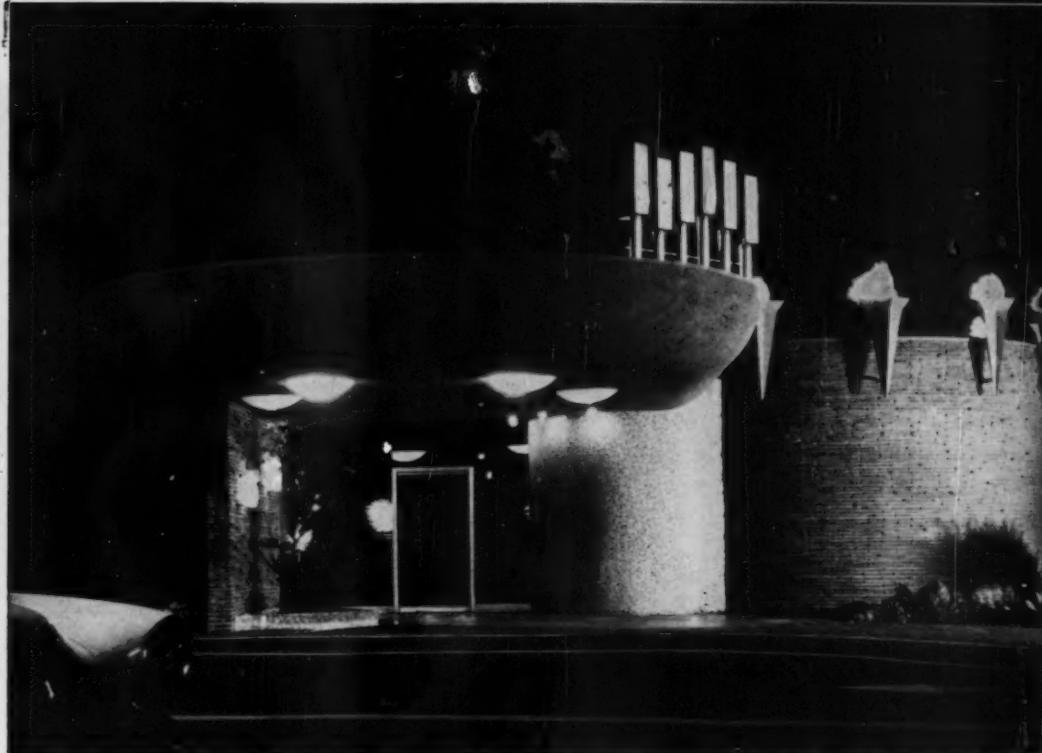
But the simile is limited. To judge from most of these houses, the nesting instinct is strictly for the birds. Neither warmth nor cosiness is necessarily adduced by natural materials and open fireplaces.

(Continued on page 62)



Eldon C. Davis, A.I.A.
Armel and Davis
Los Angeles

"In our opinion, *INSTITUTIONS* Magazine is performing an invaluable service in recording the metamorphosis in postwar design. Neither myself nor my partner, Louis Armel, know of a better clearing house for innovations in materials, ideas and trends. To design in a manner that serves the primary objective of a client, one must know a client's needs of the moment, of next year and of years to come. This can best be brought about by an excellent reporting and recording service."



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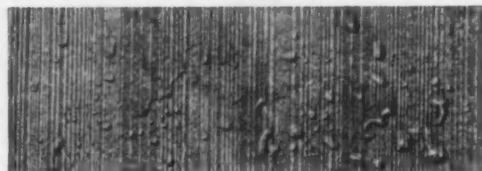


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Built with K&M Asbestos-Cement Siding and Roofing Shingles, this home becomes a lifelong tribute to the architect's judgment in specifying materials of abiding quality.

To the owner, and to everyone else who admires the house, K&M Siding Shingles, with their bright modern colors, promise years of colorful beauty. When applied to produce clear and pronounced horizontal shadow lines, K&M Shingles give houses a sleek, modern look. Made of asbestos fiber and portland cement, they won't burn, rot, or corrode, and they never need protective painting. They become harder with age... last the life of the house. The same is true of K&M Roofing Shingles, in colors and designs to suit any type of architecture.

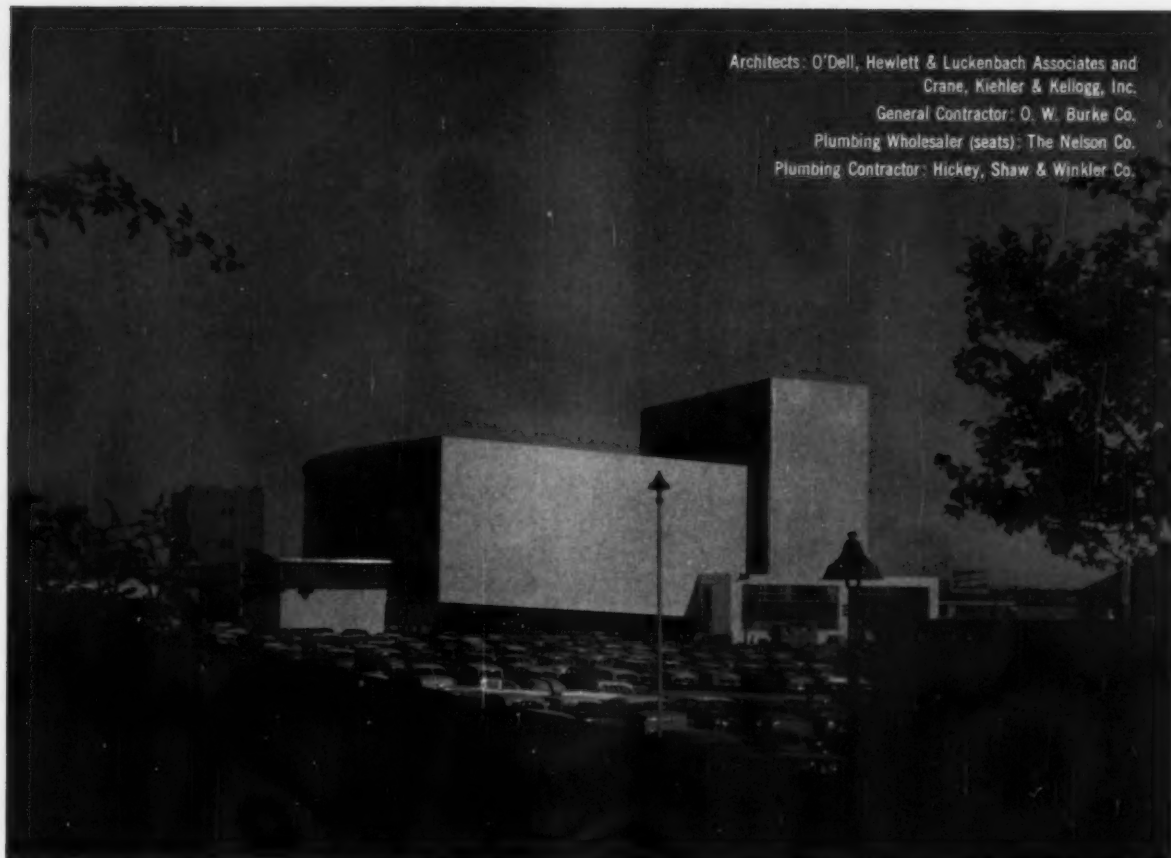
Read more about K&M Asbestos-Cement Shingles in the Architectural File (Sweet's). Also send for samples and for answers to specific questions.



SILICONED TO CARRY OFF WATER-BORNE DIRT
K&M Siding Shingles are silicone-treated. Thus water "balls up", rolls off, doesn't easily gain a foothold to produce unsightly siding streaks.



KEASBEY & MATTISON Company • Ambler • Penna.



Architects: O'Dell, Hewlett & Luckenbach Associates and
Crane, Kiehler & Kellogg, Inc.
General Contractor: O. W. Burke Co.
Plumbing Wholesaler (seats): The Nelson Co.
Plumbing Contractor: Hickey, Shaw & Winkler Co.

Detroit's new Henry and Edsel Ford Auditorium

Dream job for architects

"Only the finest" said the budget-makers for the Henry and Edsel Ford Auditorium recently completed in Detroit. Architects, engineers and specification writers literally went *to the ends of the earth* for the most resplendent materials money could buy... Blue Pearl Granite from beneath the faraway lands of Norway... Pal Deo wood paneling from the South American jungles.

But seat selection? "Only the finest" in industrial seats turned out to be Olsonite white No. 10CC.

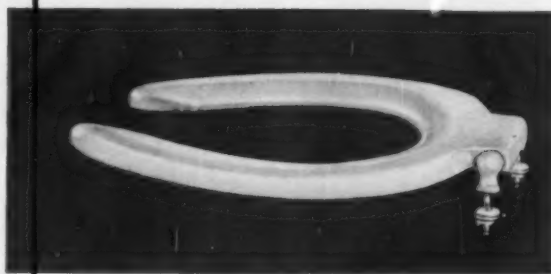
For a complete catalog of Olsonite seats, drop a note on your letterhead to:

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SEATS

SWEDISH CRUCIBLE STEEL COMPANY

Plastics Division, 8801 Conant Ave., Detroit 11, Michigan

ORIGINATORS OF THE SOLID PLASTIC SEAT

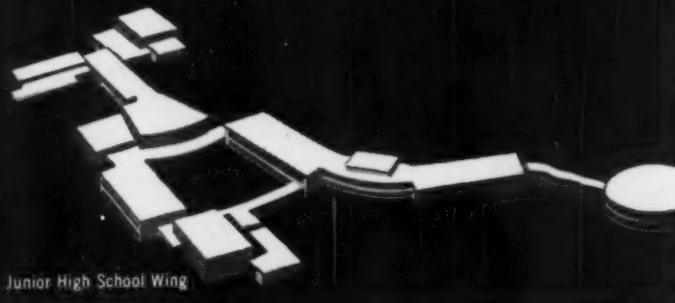


Announcing
**THE NEW
NO. 40
SEAT**

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57-A1

Architect: La Pierre, Litchfield & Partners; Consulting Electrical Engineer: Gustave B. Weiser;
Electrical Contractor: Heckler Electric Co.; Electrical Distributor: Chugg-Carlin, Inc.



Junior High School Wing

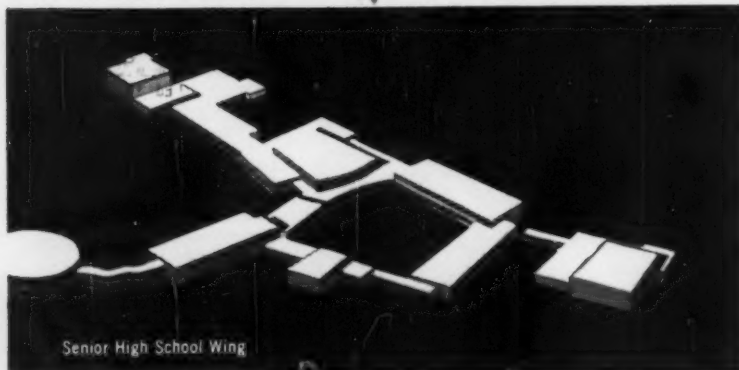
lighting
design by

mc Philben

for the magnificent new
Great Neck High School



...a wholly new concept in school architecture and quality building.



Senior High School Wing

McPhilben 43-24 recessed weather-tight downlights will light the exterior corridors of this superb new school in Great Neck, N. Y. Only 3½ inches deep, the 43-24 housings are sturdily constructed of 16 gauge galvanized steel. The gleaming satin finish of the face plates will resist all corrosive elements, thanks to the anodized cast aluminum construction. And, McPhilben's exclusive Sealume gasket of neoprene rubber will assure permanent weather-tight maintenance-free operation. Your McPhilben representative has full details about the 43-24 and other McPhilben recessed weather-tight downlights, both square and round. Contact him or write to McPhilben Lighting Co., 1333 Willoughby Avenue, Brooklyn 37, N. Y.

Representatives in major cities • Stocked by electrical wholesalers

REQUIRED READING

(Continued from page 58)

It is the details, the richly varied "design elements" that dominate this book—and rightly, considering the avowed purpose of the publication. If your client is a dour, unimaginative type who needs a shaking-up, present him with a copy of this book and the chances are that he'll be properly shaken,—if not by Matsumoto's flower-moated entrance court or the classic Edward Barnes platform, then perhaps by Mario Corbett's bathroom-with-a-view, or Eliot Noyes' romantic outdoor Connecticut corridors, or Paul Kirk's stepped terraces and lofty inside garden. The book has something of everything, something for everyone.

A LOOK BACK AT CALIFORNIA

Here Lived the Californians. By Oscar Lewis. Rinehart & Company, Inc. (N. Y.), 1957. 265 pp, illus. \$7.95.

From the merely picturesque to the eccentric, from the domestic to the magnificent, this richly illustrated informal history surveys California architecture through the last century to about 1910. Except for the contemporary California-style house, which this book does not cover, practically every kind of residence, both indigenous and imported, may be found here.

There is a house that was finished but never lived in, and there is a house that was lived in but never finished. Fire destroyed all but the shell of the first, Jack London's stone castle, only a few days before he was to move in, and his death soon afterwards stopped the rebuilding plans. As for the house that was never finished, its story seems peculiarly appropriate to a land of mysticism and flourishing cults. In the 1880's the wealthy widow of a Winchester Arms heir bought property not far from San Francisco on which a large house was being built. Mrs. Winchester had lost not only her husband but also her two children, and on a spiritualist's advice that she herself would live only so long as construction continued, she for her remaining thirty-eight years had carpenters add wings, build rooms within rooms, stairways that led nowhere, and doors that opened onto empty space. The rooms in the resulting sprawling structure have not even been counted.

On the more serious side, it is striking how many of the houses of a state that has been part of the Union hardly more than a hundred years have lasted

(Continued on page 378)



Junior Beam

construction

Junior Beams, in 6", 8", 10" and 12" sizes, are available from the mill and from principal fabricators and warehouses across the country. Junior Beams are produced exclusively by J&L. They speed erection and can be positioned with minimum manpower and equipment. They can help you cut costs in many types of architectural designs.

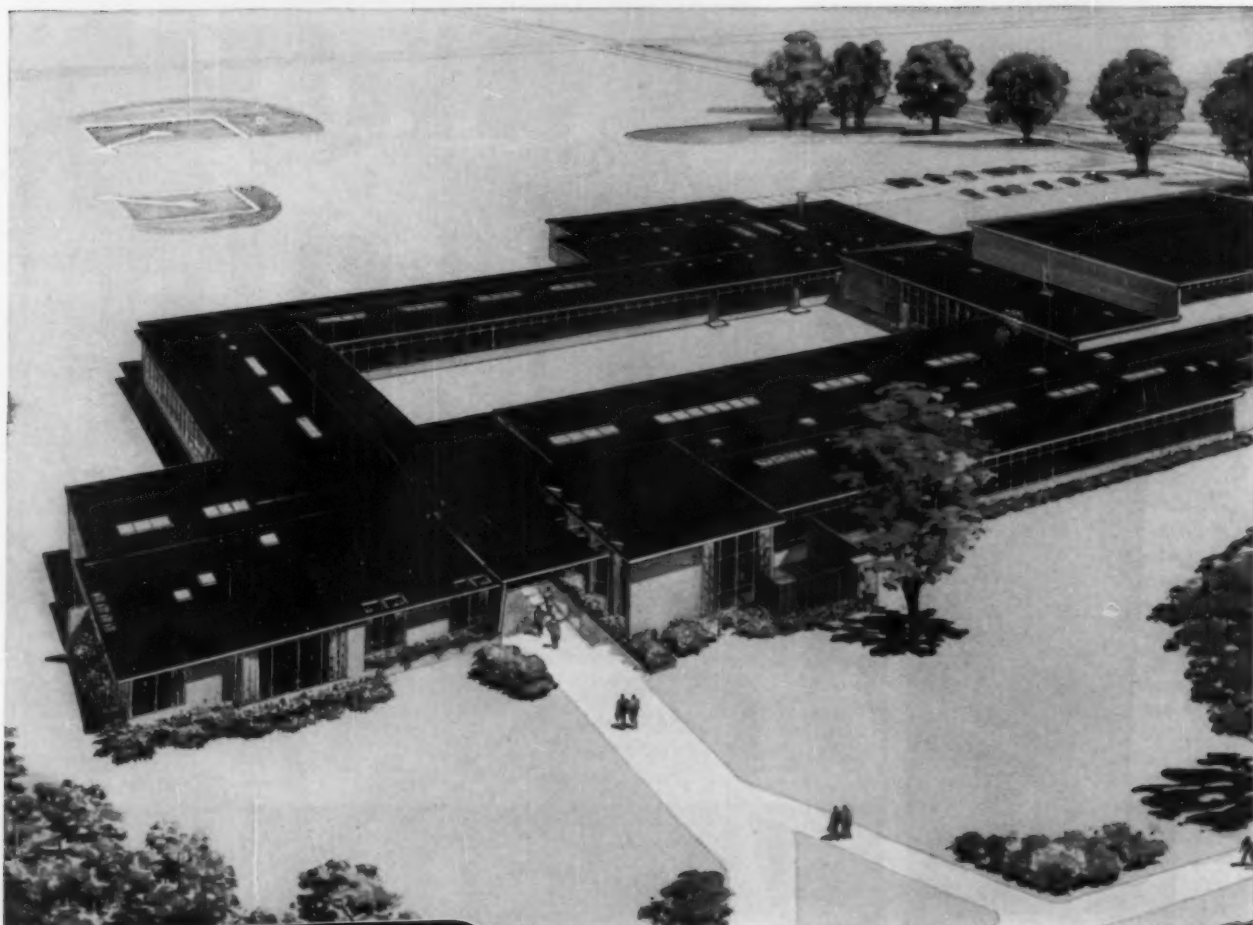


Junior Beam construction offers versatility for uses in residential and industrial construction, schools, hospitals, commercial buildings. Further information can be obtained by writing to the Jones & Laughlin Steel Corporation, Dept. 466, 3 Gateway Center, Pittsburgh 30, Pa.



Jones & Laughlin
... a great name in steel

The Right Temperature for



**Springfield High School, Springfield, Michigan. Guido A. Binda and Associates, architects, Battle Creek; T. Marvin Sahlin, mechanical engineer, Benton Harbor; Miller Davis Company, general contractor, Kalamazoo; Hunter-Prell Company, heating contractor, Battle Creek.*



Johnson *Dual* Thermostats are the practical solution to modern school heating problems where after-hours activities, such as basketball games, dramatic presentations, meetings and other events, require heating for special areas of the building.

With Johnson *Dual* Thermostats in each room of the building, any room can be heated individually without disturbing lower nighttime economy settings of other rooms during these evening activities. Johnson *Dual* Thermostats add tremendously to operating economy while providing the finest in temperature regulation.

Every School Activity...

With

JOHNSON PNEUMATIC TEMPERATURE CONTROL



Modern school designers the country over find that Johnson Pneumatic Temperature Control pays off in lower heating costs . . . system-wide simplicity of operation and upkeep . . . and complete flexibility of control to meet a wide range of school temperature needs.

With a Johnson Thermostat on the wall of every classroom, individual room temperatures can be maintained throughout the day to assure student comfort and alertness regardless of varying room occupancy levels or changing outdoor weather conditions.

In the new Springfield High School*, Springfield, Michigan, a system of Johnson Pneumatic Control offers precise control of both heat and ventilation to satisfy every day and nighttime need. The Johnson *Dual* Thermostats are automatically reset, on a pre-determined 7-day schedule, to operate at low, economy temperatures when the building is unoccupied. If the gym, a classroom or two or an office is in use outside of regular school hours, a push of the button on any room's *Dual* Thermostat restores it to the daytime comfort level *without changing the economy settings of the other thermostats in the building.*

Johnson Pneumatic Control operates all of the building's heating and ventilating equipment to provide maximum operating economies. The simplicity and flexibility of the Johnson System answers every room temperature requirement.

It's easy to investigate the unmatched advantages of a Johnson Pneumatic Temperature Control System. An engineer from a nearby Johnson branch office will gladly explain how Johnson Pneumatic Control can be applied to any new or existing building. There is no obligation. Johnson Service Company, Milwaukee 1, Wisconsin. Direct Branch Offices in Principal Cities.



The special after-hours comfort requirements of the gymnasium are easily handled by the Johnson Control System. With Johnson *Dual* Thermostats, the gymnasium can be economically heated and ventilated independently of other sections of the building to save fuel.



In science rooms the study pattern may include use of heat developing equipment which could create discomfort. Here, again, the thermostat on the wall automatically adjusts heat output and insures proper ventilation for maximum comfort.



In some rooms cooling, rather than heating, is often needed even in the coldest weather. Sensitive Johnson *Dual* Thermostats easily solve this problem by increasing the volume of outdoor air used for ventilation and reducing the heat output.

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SINCE 1885

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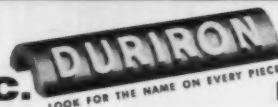


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Duriron is the high silicon iron drain pipe which has been specified by architects and engineers for more than 30 years for use wherever acids and other corrosive solutions are encountered. Not a coating, Duriron offers resistance throughout the entire pipe wall, and usually outlasts the buildings themselves. Duriron is installed by ordinary plumbing methods. Duriron pipe and fittings are stocked by leading wholesalers everywhere. Insist on Duriron.

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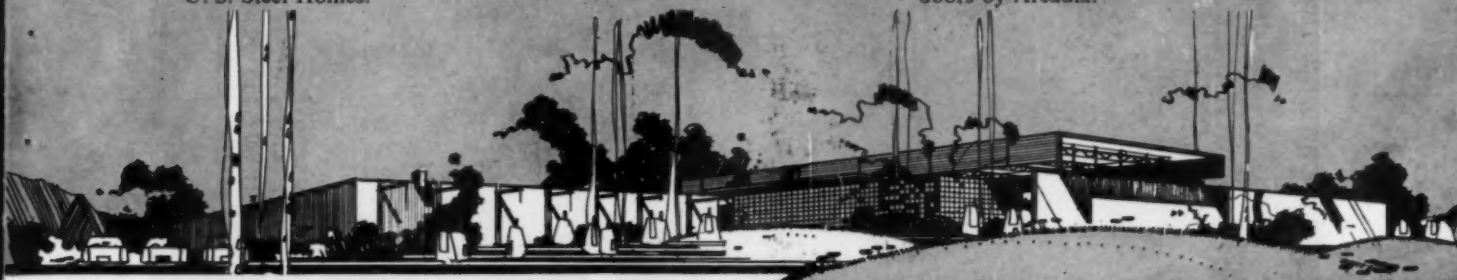
THE DURIRON COMPANY, INC.



DAYTON, OHIO

problem: Organizing several vast recreation areas, both inside and outdoors, while facilitating unrestricted movement from one area to the other for children at play. This situation would require a virtual removal of conventional walls to provide for complete integration of indoors and outdoors. This is the architects' problem in presenting a design for proposed Youth Centers for U. S. Steel Homes.

solution: Walls would be constructed with sliding glass doors. The resulting proposed design of Youth Centers for U. S. Steel Homes would feature non-load-bearing walls of glass, complete with sliding glass doors by Arcadia.



YOUTH CENTER for UNITED STATES STEEL HOMES

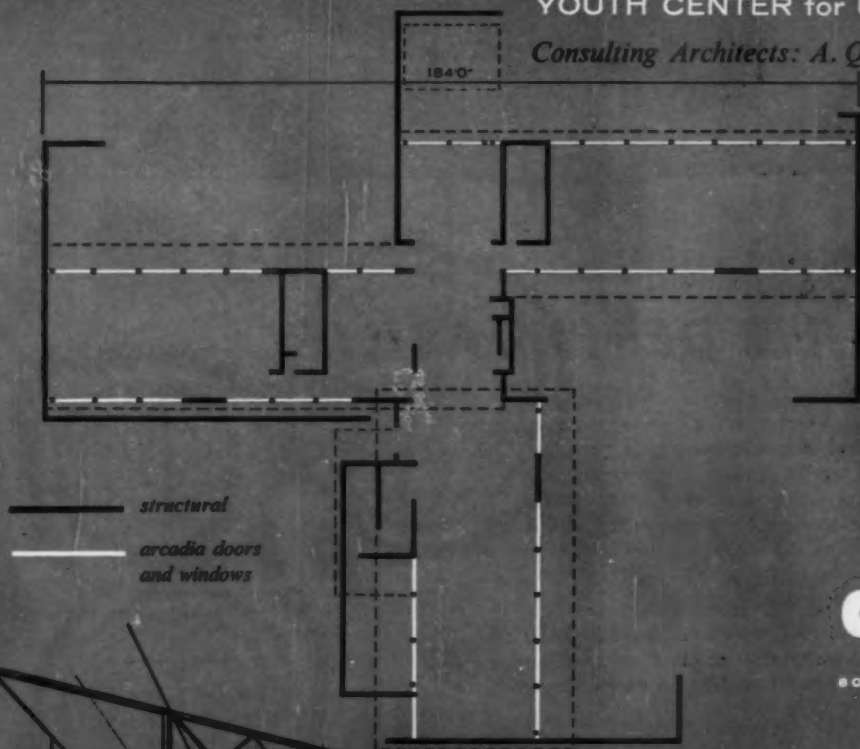
Consulting Architects: A. Quincy Jones, Frederick E. Emmons
Robert A. Little, Rufus Nims

*the name for
the finest in
windows and doors
of sliding glass
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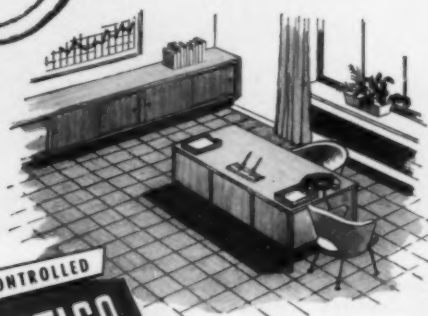
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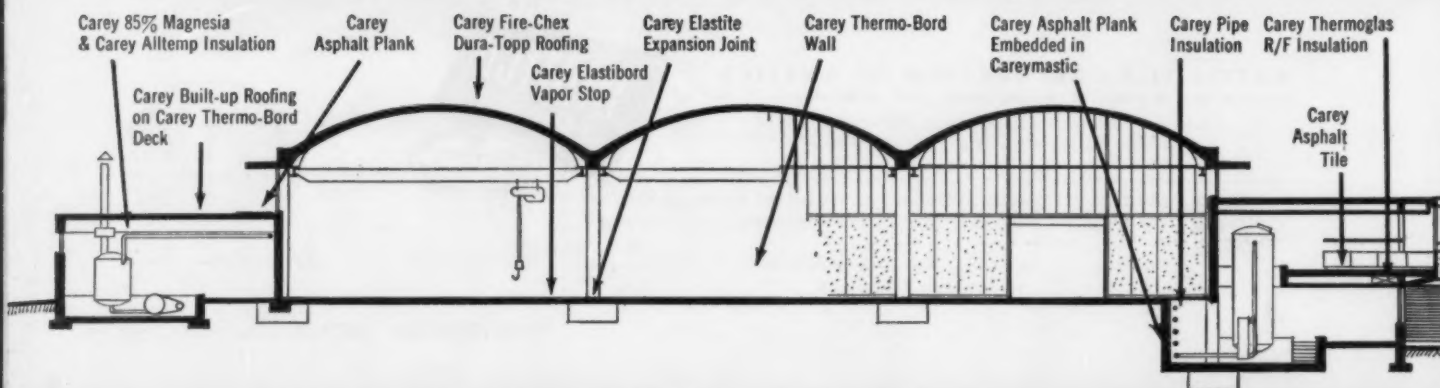
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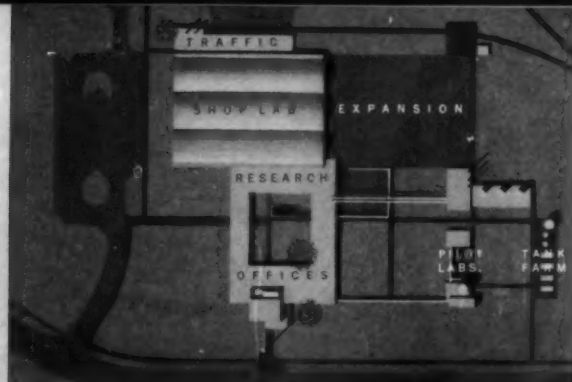
Cyrus L. Baxter, A.I.A.

and associates

design

a research and

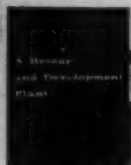




development plant

Activity in research and development has become a symbol of progress for America's industrial leaders. This is revealed in the provisions for extensive research and development plants in the building programs of so many companies.

This design study—the work of a prominent firm of industrial architects—offers a practical construction plan for this increasingly important building type. It incorporates the use of many popular Carey Building Products.

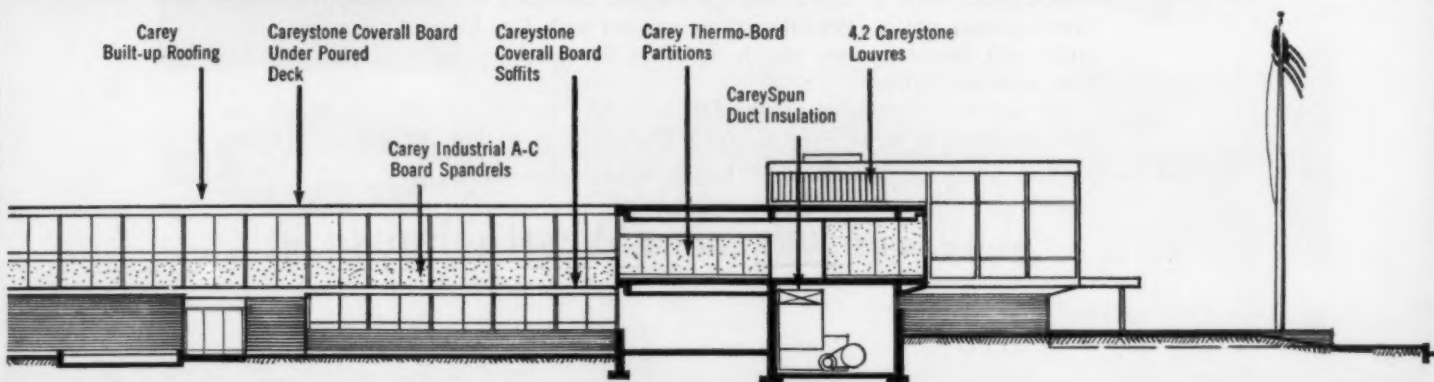


SEND FOR your work sheet which details the wide variety of Carey products selected by the architects for use in this research and development plant. Write to The Philip Carey Mfg. Company, Dept. AR-77 Lockland, Cincinnati 15, Ohio.



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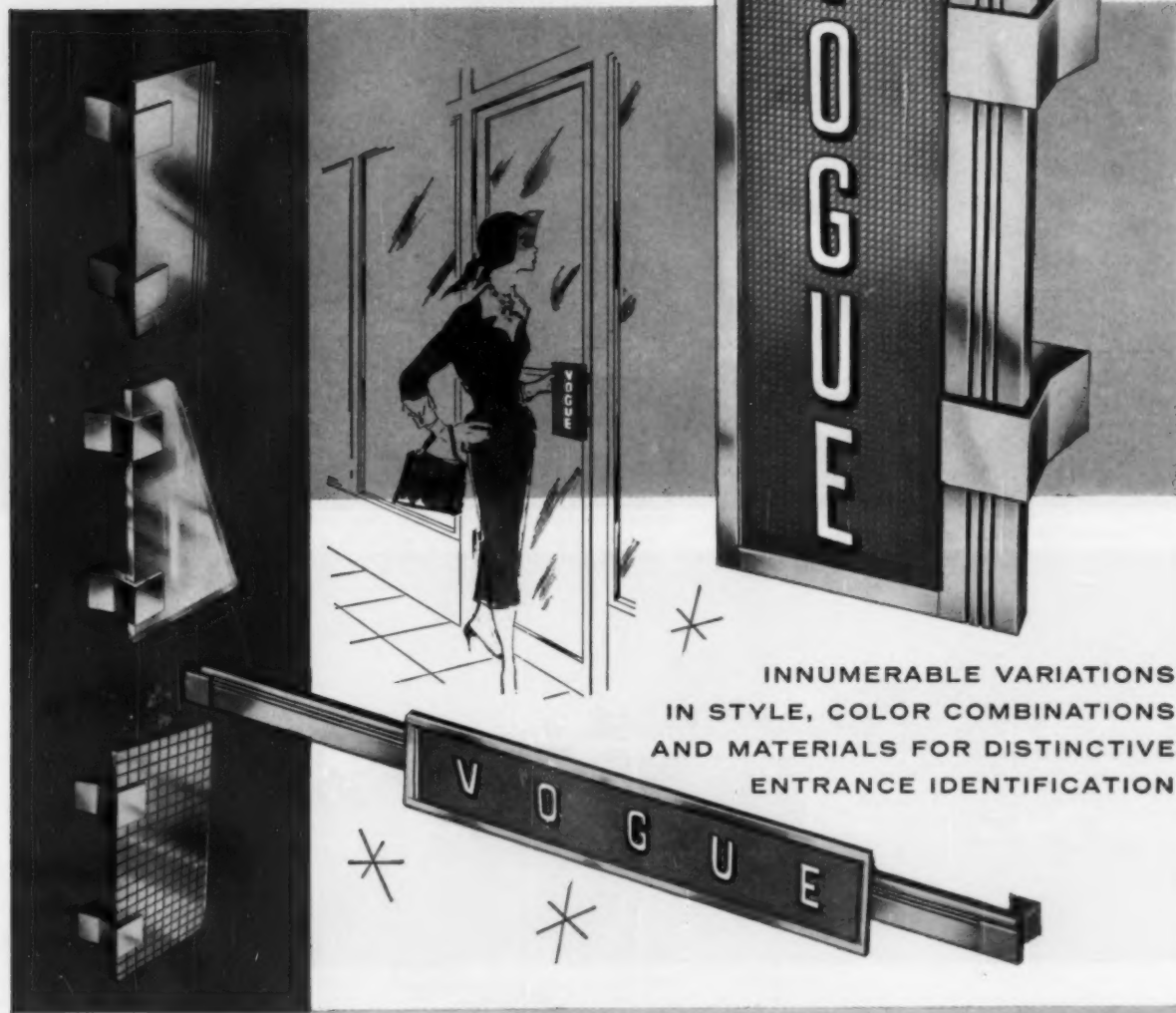
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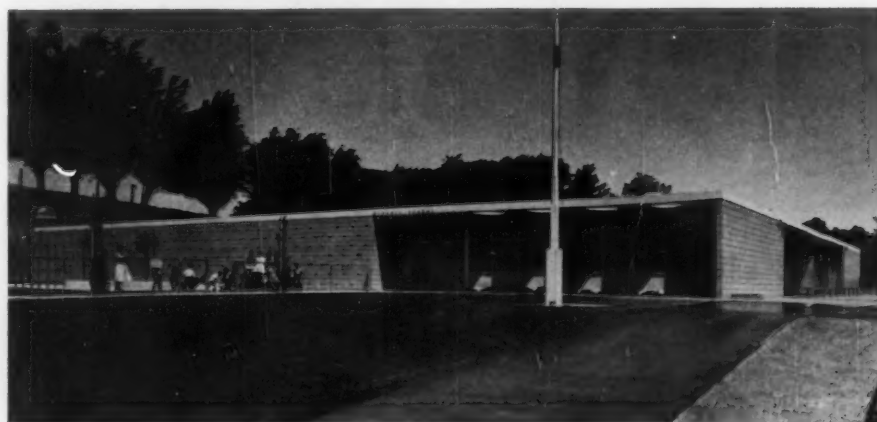
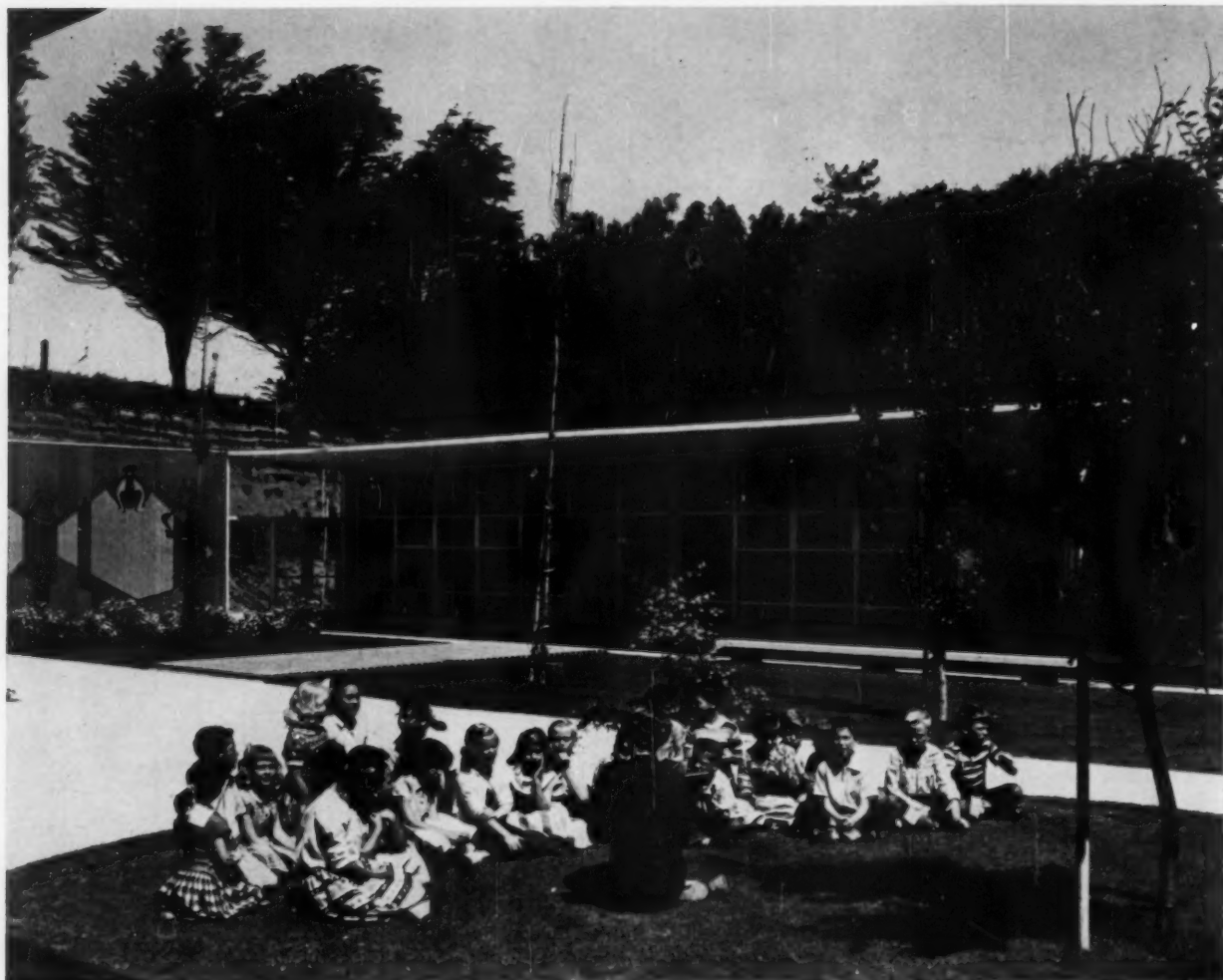
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San Francisco, Cal.

CONSULTING ENGINEERS:

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A COMPLETE LINE OF EQUIPMENT FOR HEATING AND COOLING WITH WATER



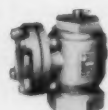
Monoflo Fittings



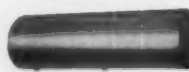
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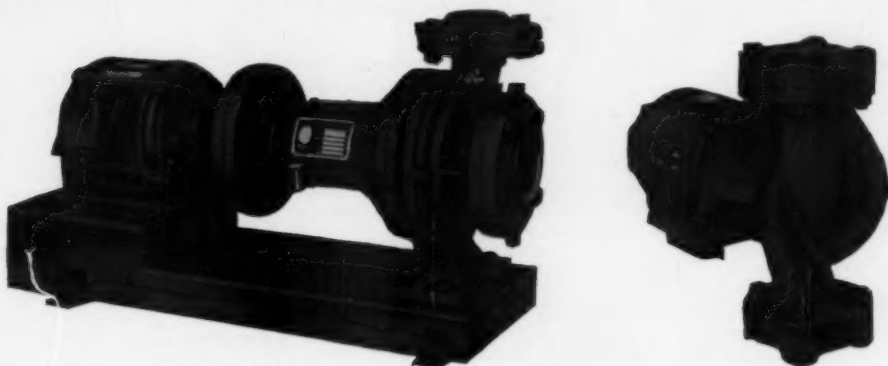
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B&G Booster Pumps

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For larger installations, the B&G Universal Pump offers many exclusive advantages.

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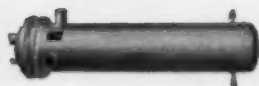
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5. **Shaft.** Oversized—affording large bearing surfaces. Made of special alloy polished steel. Heat-treated integral thrust collar absorbs end-thrust...lengthens seal and motor bearing life.
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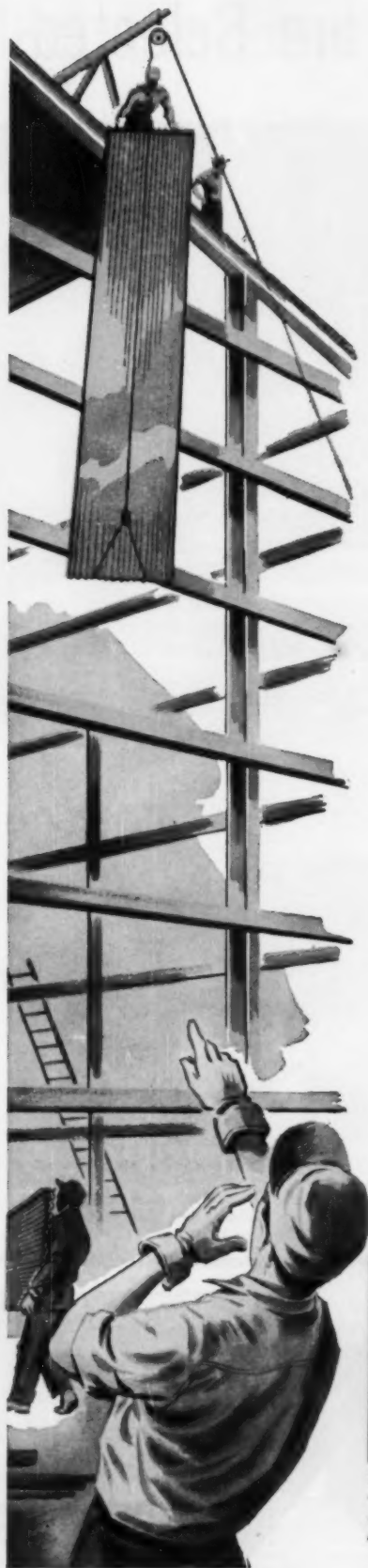
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ACP Architectural Alodine®

PROCESS FOR ALUMINUM

• PROTECTIVE • DECORATIVE • GLARE-REDUCING

Architectural Alodine is protective because it further improves the good weathering characteristics of aluminum. It provides unusually effective protection at the seaside and in industrial areas. Architectural Alodine is decorative because it chemically forms an attractive green color which enhances the appearance of the aluminum. The coating formed is integral with the metal and the color is sunfast. Architectural Alodine is glare-reducing because the chemically formed coating materially reduces the natural reflectivity of aluminum. And the process is inexpensive, compared to other commercial finishes. Write for samples of aluminum which has been Architectural Alodine treated—no obligation.

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Detroit, Mich. • St. Joseph, Mo. • Niles, Calif. • Windsor, Ont.



New Chemical Horizons for Industry and Agriculture

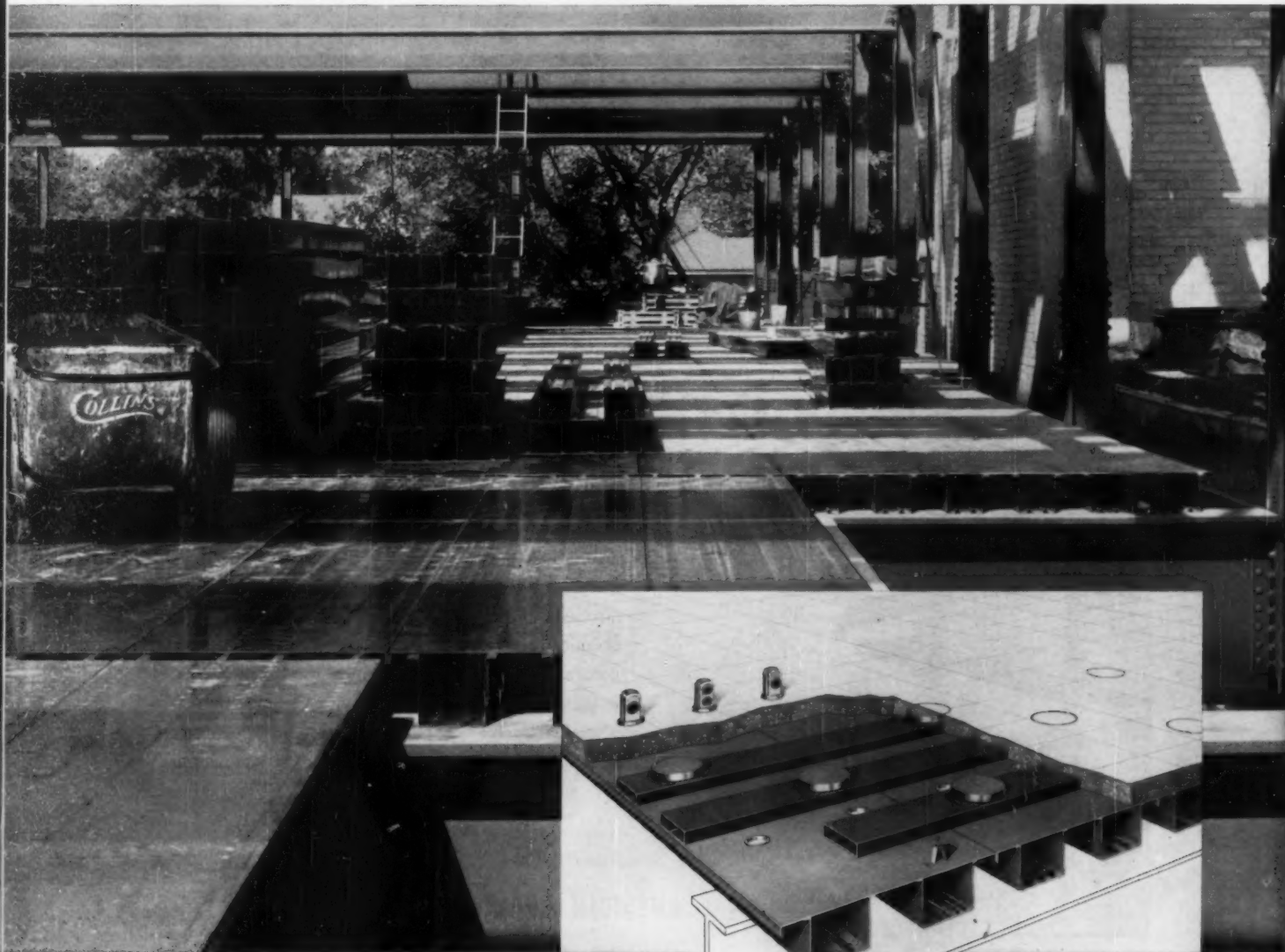


INDUSTRIAL ROOFING, too, can be treated with ACP Architectural Alodine to protect the metal and give the appearance of weathered copper or assume a soft, mellow sea-green.



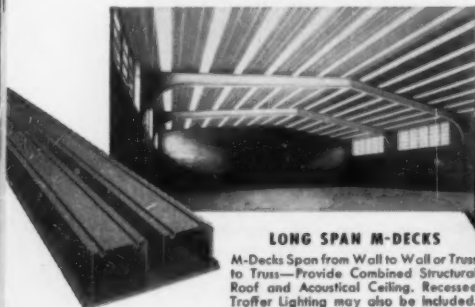
INDUSTRIAL SIDING is another product used in building construction which can be treated with ACP Architectural Alodine to beautify it and protect it.

M-FLOORS are Selected to



Modern Four Story Office Building for Kansas City Life Insurance Company, Kansas City, Missouri. Mahon Electrified M-Floor Construction was used throughout. Mahon Long Span M-Deck was employed in the Roof Construction. Edward W. Tanner & Associates, Architects. Collins Construction Company, General Contractors.

Sectional View of an Electrified Cellular Steel Floor Constructed with Mahon M-Floor Section M2, and Energized with a Three Header Duct Electrical Distribution System.



LONG SPAN M-DECKS

M-Decks Span from Wall to Wall or Truss to Truss—Provide Combined Structural Roof and Acoustical Ceiling. Recessed Troffer Lighting may also be included.



ACOUSTICAL and TROFFER FORMS

Provide an Effective Acoustical Ceiling with Recessed Troffer Lighting—Serve as Permanent Forms in Concrete Joist and Slab Construction of Floors and Roofs.



CONCRETE FLOOR FORMS

Mahon Permanent Concrete Floor Forms in various types meet virtually any requirement in concrete floor slab construction over structural steel framing.

Meet the Load and Electrical Requirements in a Modern Insurance Office Building!

MAHON M-FLOOR SECTIONS

CEL-BEAMS, WHICH ARE UTILIZED AS
ELECTRICAL RACEWAYS, ARE 6" WIDE



M-FLOOR SECTION
M1



M-FLOOR SECTION
M2



M-FLOOR SECTION
M2X



M-FLOOR SECTION
M3

In a four story addition to the Kansas City Life Insurance Company's home office building in Kansas City, Mahon M-Floors were selected to meet the unusual live load requirements of 180 lbs. per sq. ft., and to provide the additional electrical raceway capacity required for the myriad electronic business machines and the countless telephone and intercom circuits common to the insurance business.

This building, shown under construction at the left, is a unique design in that it provides for 50 ft. clear span laterally between outside columns on all floors. The Mahon M-Floor Section employed for the structural sub-floor was placed on simple spans of 16'-8". It provided a flat plate upper surface with Cel-Beams of 6" in depth.

Electrically, this Mahon M-Floor Section provides Cel-Beam Raceways 6" x 6" on 1'-0" centers under the entire floor area. These 6" wide Mahon Cel-Beams provide the extra raceway capacity needed for this type of occupancy, and permit greater latitude in the location of floor service fittings . . . they also permit the use of 4" diameter access hand-holes between Electrical Header Ducts and the Cel-Beam Raceways—this greatly facilitates fishing for wires and wire pulling when changes in electrical circuits or additional circuits become necessary. High or low Potential Floor Service Fittings can be installed wherever required in every square foot of floor surface throughout the building.

This is truly a modern office building . . . it is free from interior columns, and it has a built-in guarantee against electrical obsolescence.

When you select an electrified steel sub-floor for your next building, you will want all of the structural and electrical advantages that have been engineered into Mahon M-Floors. Comparison will convince you that the basic functional requisites of a Cellular Steel Sub-Floor are more fully realized in the design of Mahon M-Floor Cel-Beam Sections.

See Sweet's File for information, or write for Catalogue M-57.

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Standard Manually, Mechanically or Power Operated Rolling Steel Doors and Grilles. Underwriters' Labeled Automatic Closing Rolling Steel Fire Doors and Fire Shutters.

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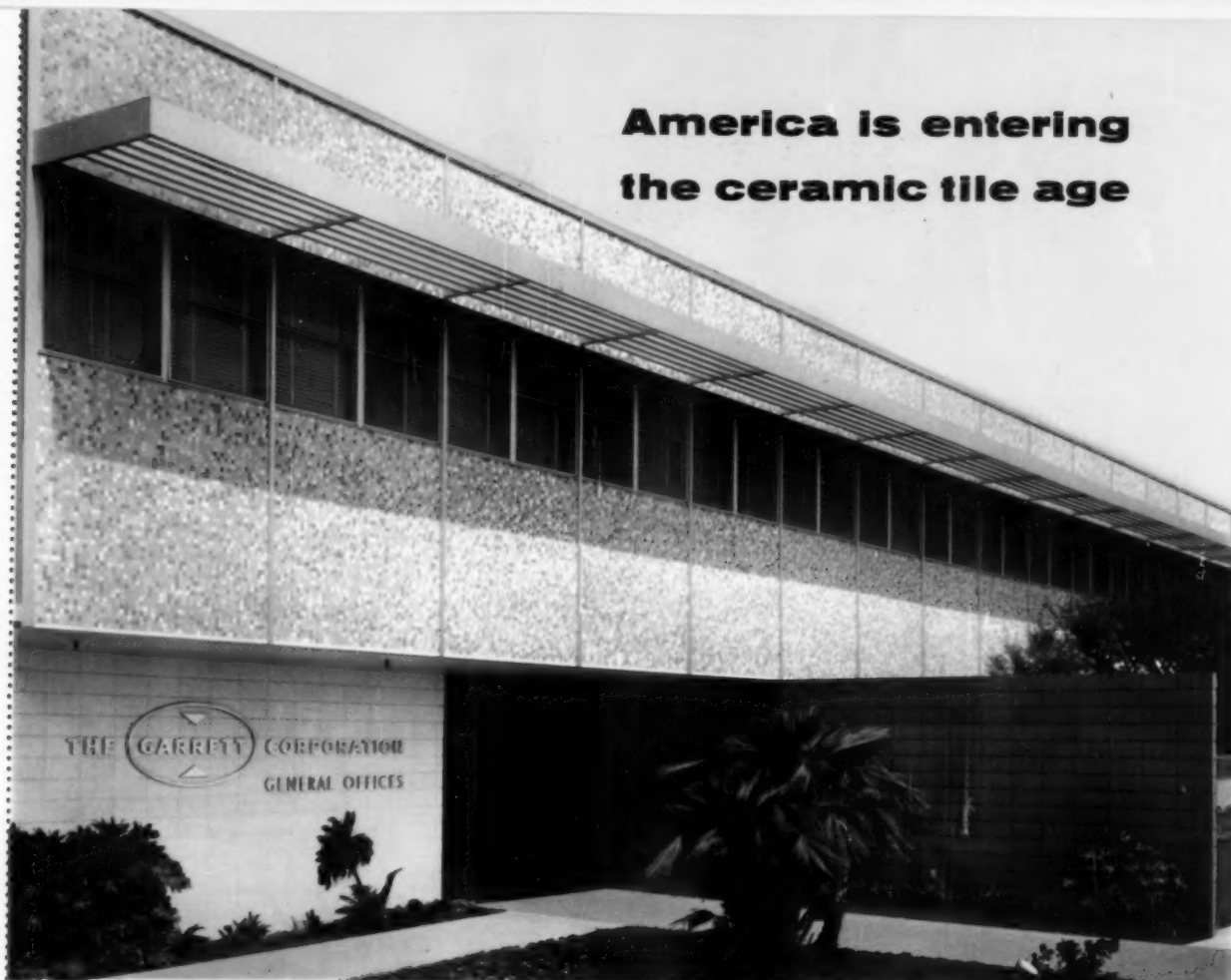


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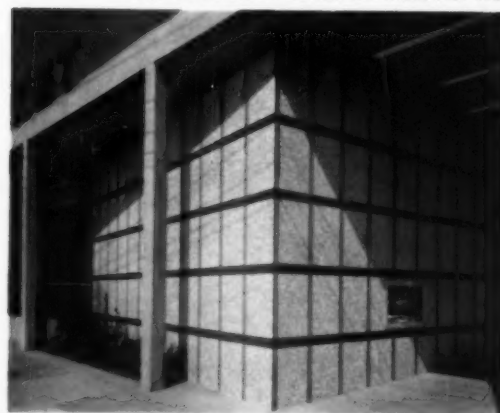
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MOSAIC®

Architectural spirit preserved in Mosaic Ceramic Tile

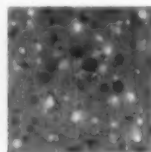
Mosaic Medley Patterns—An excitingly different tile medium for today's designers. Inspired by ancient mosaics, Mosaic Medleys are random mixtures of harmonizing or contrasting ceramic mosaic colors—three, four or more. You specify colors in the percentages you desire. On large wall expanses, or in limited areas—indoors or out—Mosaic Medleys create textured enrichment possible with no other material.



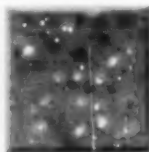
Ceramic Mosaics, used in Mosaic Medley Patterns, are Harmonitone (solid colors), Velvetex (mottled colors) and Granitex (mottled earthy colors) dust-pressed tiles. Weatherproof, moistureproof, fadeproof, stainproof—a permanently colorful material for countertops, as well as floors and walls. Porcelain Harmonitone and Velvetex are available for Medleys in $1\frac{1}{16}$ " squares and also in $1\frac{3}{16}$ " and $\frac{3}{4}$ " squares and $1\frac{3}{16}$ " x $\frac{3}{4}$ " oblongs. Natural clay type Granitex is available in $1\frac{1}{16}$ " squares and also in $2\frac{3}{16}$ " squares and $2\frac{3}{16}$ " x $1\frac{1}{16}$ " oblongs.



Harmonitone
(square edge)



Velvetex
(square edge)



Granitex (cushion
or square edge)

Mosaic also manufactures Impervious Electrically-Conductive Ceramic Mosaic floor tile for permanent safety in hospital anesthetizing areas. For swimming pools, there is a broad choice of Mosaic tile, including letters and numerals.

The complete Mosaic line of ceramic tile includes ceramic mosaics, glazed wall tile, All-Tile Accessories, Carlyle quarry tile, a wide selection of decorated tile, Everglaze (textured hard glaze) and Faience.

Floors and Walls of Mosaic Ceramic Tile will contribute to a greater return on your clients' building investment. Maintenance cost is less than with any other material—in many cases by as much as 50%! And the original investment is reasonable.

With our recently expanded manufacturing and distribution facilities, we can fill your tile requirements promptly. A broad selection of tile is carried in stock locally in the Mosaic warehouses listed below. You and your clients are welcome to make full use of our showrooms and those of your tile contractor.

Types of Ceramic Mosaic

Harmonitone	Granitex
Velvetex	Electrically-Conductive
Everglaze	Faience

The Mosaic Tile Workbook for Architects, Form No. 218, is in Sweets. For additional data, write The Mosaic Tile Company, Dept. A, Zanesville, Ohio, or The Mosaic Tile Company, Dept. A, 829 N. Highland Ave., Hollywood 38, Calif.

Ask for:

Mosaic Medley Patterns, Form No. 211

Buildings of Today, Form No. 208

The Mosaic Tile Book of Beautiful Homes, Form No. 195

Mosaic Swimming Pool Catalog, Form No. 158

West Coast Color Catalog (West of Rockies), Form No. 165

Mosaic Impervious Electrically-Conductive Floor Tile Factbook, Form No. 196

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Showroom-Warehouses: Atlanta, Baltimore, Boston, Buffalo, Chicago, Cleveland, Corona, Cal., Dallas, Denver, Detroit, El Segundo, Cal., Fresno, Greensboro, E. Hartford, Hempstead, L.I., N.Y., Hollywood, Ironton, Ohio, Jackson, Miss., Little Rock, Matawan, N.J., Miami, Milford, Conn., Milwaukee, Minneapolis, New Orleans, New York (Showroom only), Philadelphia, Portland, Rosemead, Cal., Salt Lake City, San Antonio, San Diego, San Francisco, Santa Clara, Cal., Seattle, Tampa, Washington, D.C., Zanesville, Ohio.

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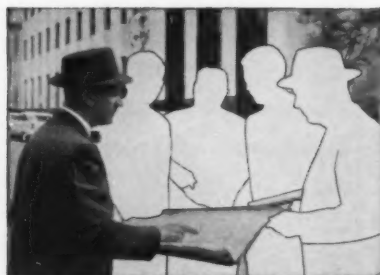
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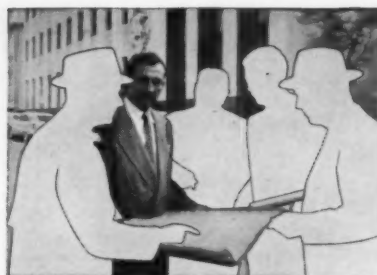
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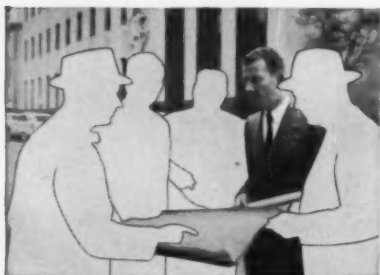
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—I. A. Lindberg, American Blower Representative



"All the equipment must meet government specifications."
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"Load variations, 0 to 100%, are easy to handle with Tonrac."
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"It took 8 men only 3 days to install the two Tonrac units."
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Result: Teamwork brings new comfort to New Orleans.

Conference on comfort in New Orleans

Here's how American Blower's advanced air-conditioning equipment helped provide a temperature-perfect indoor climate for New Orleans' block-square Federal Office Building.



The teamwork that brought effective air conditioning to the Federal Office Building, New Orleans, La., can help make your system a success. Why not call in an American Blower man when you reach the planning stage?

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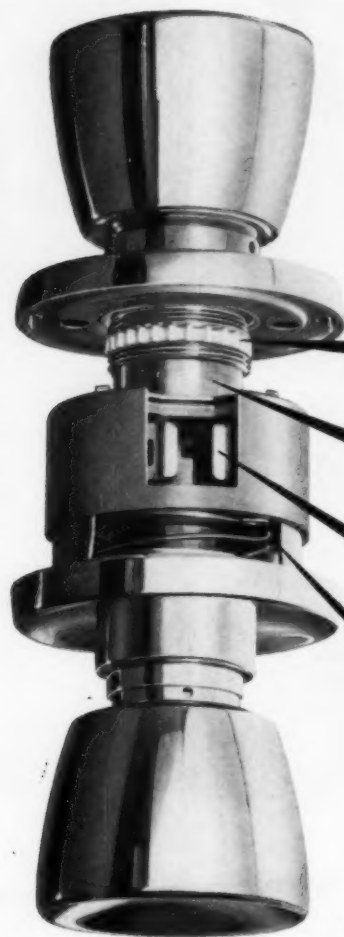
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engineered by the leaders in lock science

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2

Heavy-gauge spindles are held in position by long bearings for perfect alignment.

3

A heavy cast brass slide guarantees balanced knob action with smooth, efficient retraction of the latch.

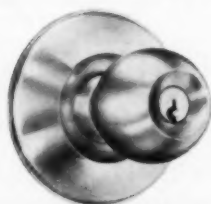
4

Mechanisms are available in your choice of several materials to meet the atmospheric conditions of each particular installation... in bronze and monel, stainless steel, or zinc-plated and dichromated steel.

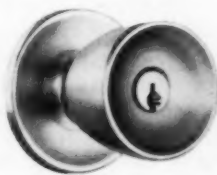
designed by the leaders in lock science...



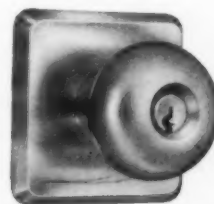
CUPRA design



MERCURY design



TULIP design



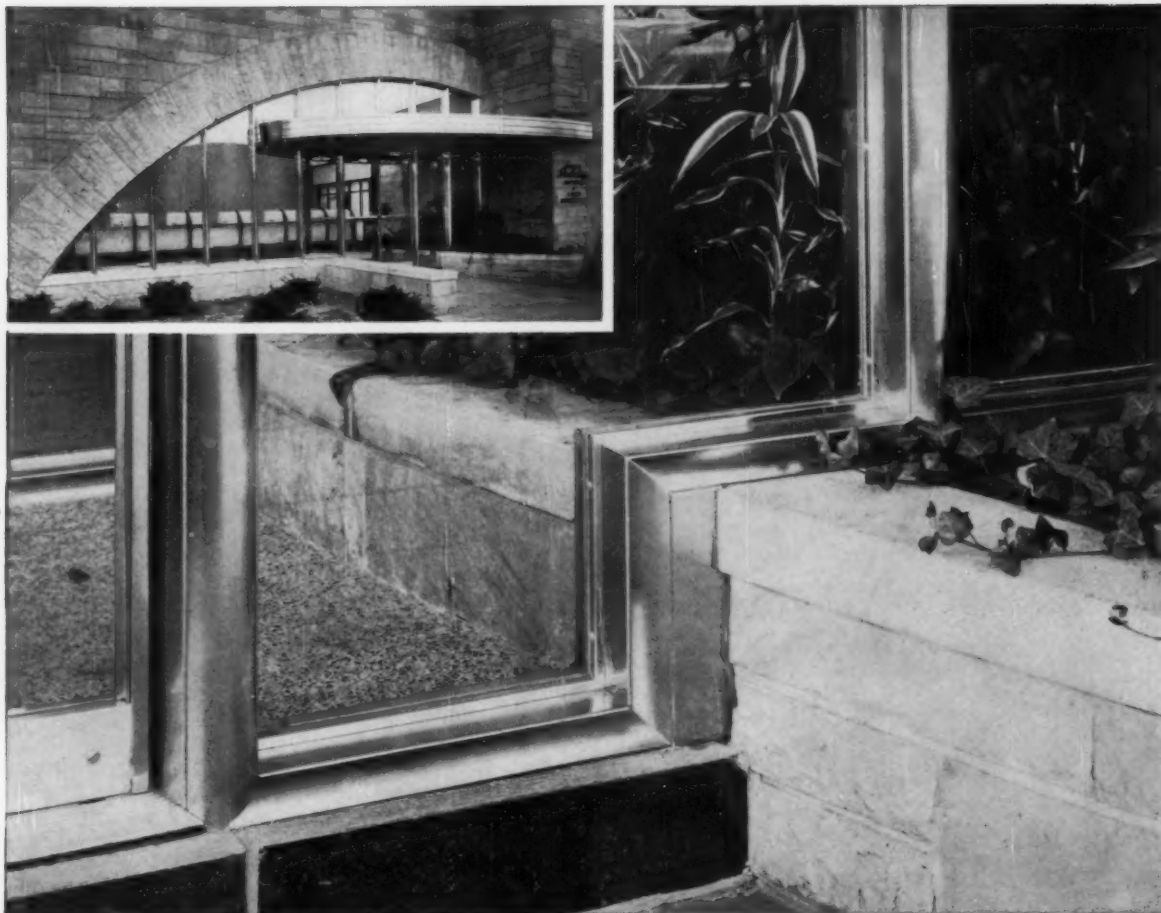
HANOVER design

Illustrated above are a few of the many Schlage heavy-duty lock designs available. From Schlage's complete line of heavy-duty locks, there's a Schlage lock design to meet the specialized requirements of the most discriminating architect.

For the latest information on Schlage heavy-duty locks, contact your Schlage representative or write to Dept. A-7.

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Here's an intriguing entrance design for a recently-built midwestern structure. Stone and stainless steel and glass . . . a planter that continues inside . . . two sweeping curves in opposed planes.

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FOR SPECIAL SERVICES

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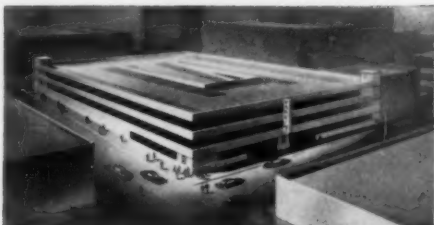
• Dept. 764, New Haven, Connecticut

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NEED FOR AUXILIARY
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REINFORCED CONCRETE

for Buffalo's four new
parking ramps



MOHAWK PARKING RAMP
Architects: James, Meadows & Howard, and
Abbott, Merkt & Company
General Contractor: John W. Cowper Co., Inc.

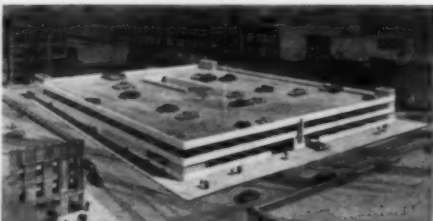
James N. De Serio, P. E.

Consulting Structural Engineer
on all four jobs pictured below

BROADWAY MARKET & PARKING RAMP
Architects: James, Meadows & Howard
General Contractor: Siegfried Construction Co.



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Architects: James, Meadows & Howard, and
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General Contractor: Siegfried Construction Co.



EAGLE PARKING RAMP
Architects: James, Meadows & Howard, and
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General Contractor: John W. Cowper Co., Inc.

SLAB AND FLOOR CONSTRUCTION, at Mohawk Ramp and Seneca
Ramp, was necessitated by particular column arrangement.



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Efficient water pattern
of Hobart revolving wash action.

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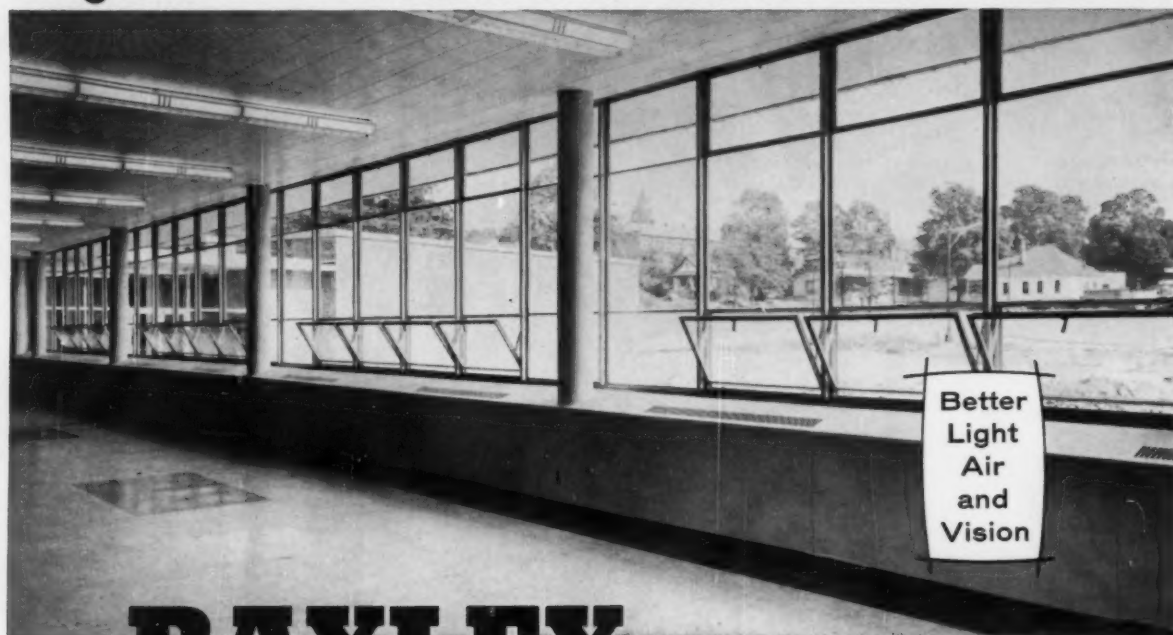
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Reliability

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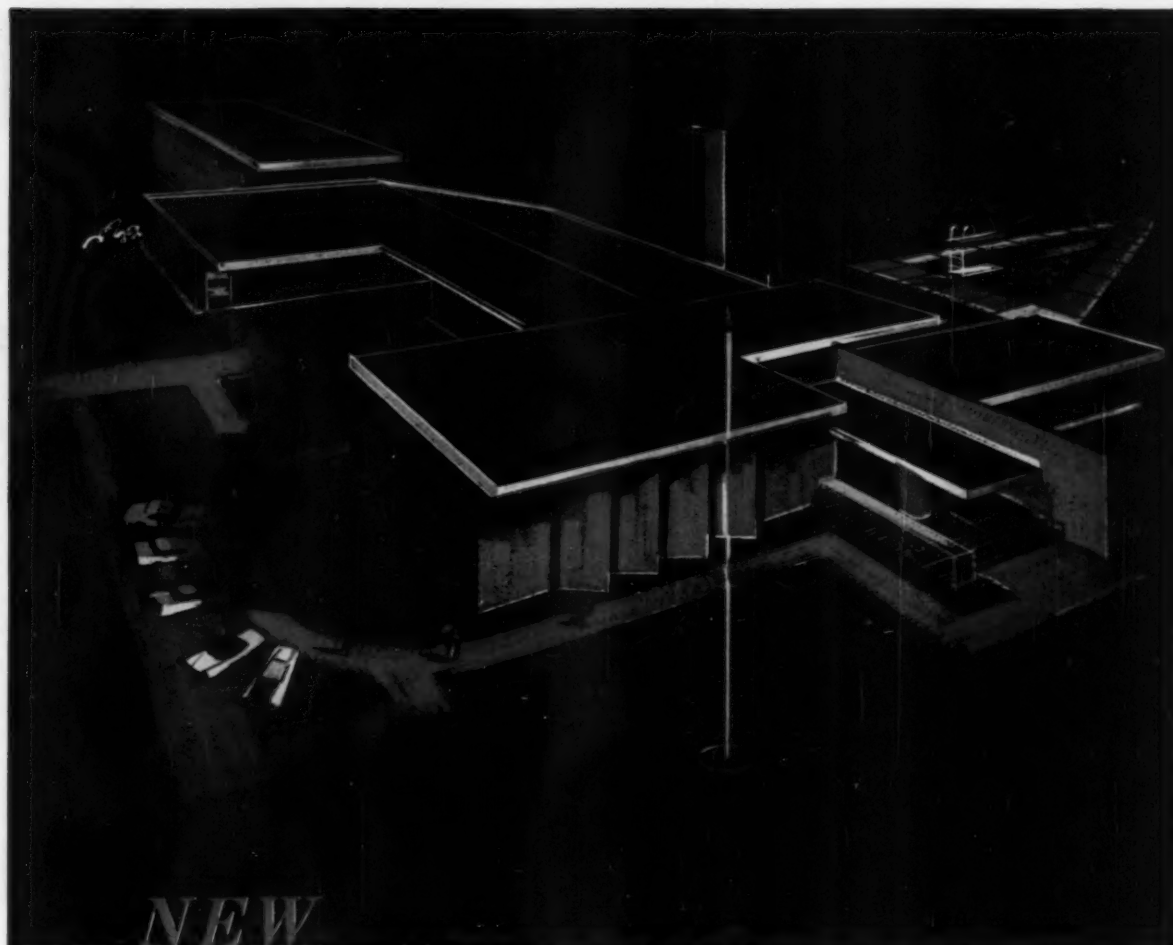
Bayley Windows afford nature-quality light and better vision; provide any desired degree of draft and weather controlled ventilation; and insure maximum service life with the minimum maintenance or upkeep. Their designs are suited to any type of wall construction, including the newer curtain or window-wall treatments employed in many of today's modern schools. Supplementing these product qualities, Bayley's window service is *complete* — counseling and engineering the job from the building's inception until approval at time of final occupancy.

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Specify Horn Staybrite integral color to enhance the beauty of all concrete and mortar surfaces.

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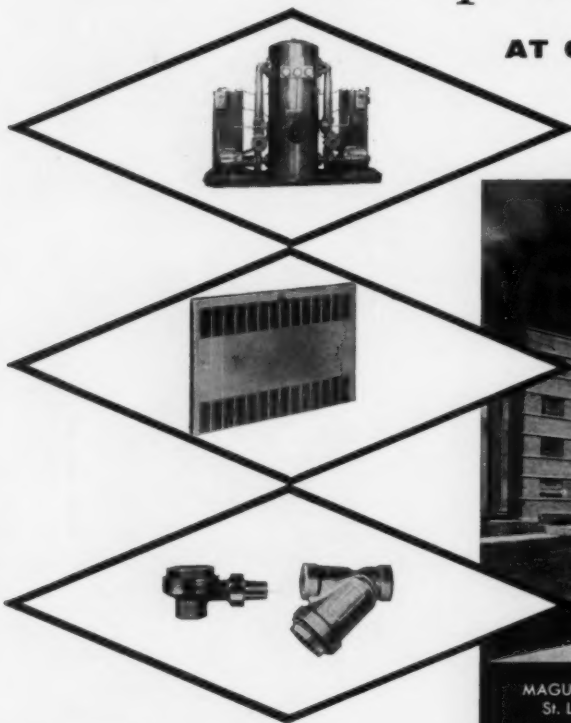
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To—

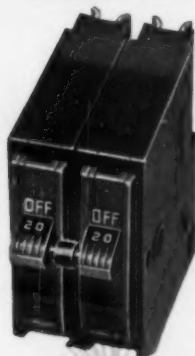
QO—FINEST BREAKER EVER BUILT!

1-POLE



15-50 Amps

2-POLE



15-70 Amps

3-POLE



15-50 Amps

ONE, TWO and THREE POLES GO ANYWHERE—UNLIMITED!

Square D's NEW 3-pole QO
crashes the 3-phase price barrier!

Square D's 2-pole QO Now extended
to 70 Amperes for heavier loads!

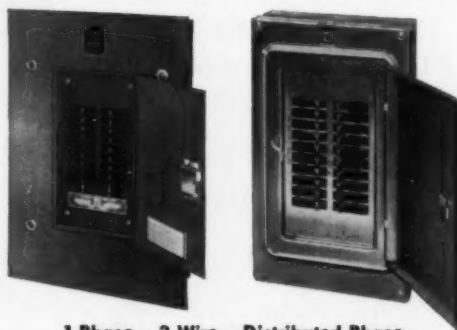
QO FEATURES

- One size per pole. No space penalty
- Plug-in mounting. No time-wasting screws
- Silver-plated connections equal to best bolted design
- Switches like a "T" rated switch
- Temperature-corrected. No nuisance tripping
- Meets Federal Spec WP-131A—Class A
- Box lugs on line, load and neutral
- Rejection "ears" prevent overprotecting mistakes

NO CALL BACKS

Write for QO Bulletin. Address Square D Company,
6060 Rivard Street, Detroit 11, Michigan.

SAME BREAKER... PANELBOARDS & LOADCENTERS



1 Phase—3 Wire—Distributed Phase
3 Phase—4 Wire—Distributed Phase
2 THROUGH 42 CIRCUITS

NOW...EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE!



SQUARE D COMPANY

Indirect Luminous Ceilings

Here are the facts...
 about a new approach to
LUMINOUS CEILINGS

Send for your copy NOW
 and find out why
 I·L·C provides far more
EFFICIENCY
ECONOMY
ARCHITECTURAL HARMONY

FILE OUT AND CLIP COUPON • MAIL TO—

SILVRAY LIGHTING, INC., RKO BLDG., RADIO CITY, N. Y.

Dear Sirs:

Will you kindly, without any obligation on my part, send me the ILC Booklet #S-457 with complete data on Indirect Luminous Ceilings.

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____

SILVRAY
LIGHTING, INC.
 AND ASSOCIATED COMPANIES
 RKO Bldg., Radio City, N. Y.



PRECAST FLOORS ON STEEL FRAME

This picture was taken during the erection of precast floors on the Shoreland Towers, Indianapolis, one of three luxury apartments designed by Paul I. Cripe, Inc., and built by L and L Building Corporation. All three used Flexicore on a steel frame. This method can cut a month or two off construction time on a job of this size, and give your client a month or two addi-

tional rental income. Construction costs are cut by saving weeks of on-the-job labor and the usual delays of poured floors. The smooth underside of the Flexicore floors were exposed throughout, eliminating plaster ceilings. For more information, phone or write your nearest manufacturer listed below, or The Flexicore Co., Inc., Dayton 1, Ohio.



Flexicore slabs are exposed to make attractive ceiling treatment for auto entrance, left, rental unit, center, lobby, right.

ALABAMA, Birmingham 1
The Alabama Cement Tile Co.
COLORADO, Denver 1, PO 366
Flexicore Company of Colorado
FLORIDA, Tampa, PO 2189
Universal Concrete Pipe Div.
ILLINOIS, Chicago, Franklin Pk.
Mid-West Flexicore
INDIANA, E. Chicago, PO 539
Calumet Flexicore Corporation
MICHIGAN, Livonia, PO 2006
Price Brothers Company
MINNESOTA, St. Paul E-4
Malin Concrete Products Co.
MISSOURI, E. St. Louis, Ill.
St. Louis Flexicore Inc.

NEW JERSEY, Camden
Flexicore Div. of Camden Lime
NEW YORK, Buffalo 6
Anchor Concrete Products, Inc.
NEW YORK, New York 17
Flexicore Precast Inc.

NORTH CAROLINA, Lenoirville
W. R. Bonsal Company, Inc.
OHIO, Akron-Cleveland
Lake Erie Flex., Kent, Ohio
OHIO, Columbus 22
Arrowcrete Corporation

OHIO, Dayton 1, PO 825
Price Brothers Company
PENNSYLVANIA, Monongahela
Pittsburgh Flexicore Company
RHODE ISLAND, Saylesville
Durastone Flexicore Corporation

TEXAS, Houston, 4511 Kyle St.
Flexicore of Texas, Inc.
WEST VIRGINIA, Wheeling
Universal Concrete Pipe Div.
WISCONSIN, Beloit, PO 325
Mid-States Concrete Products Co.
CANADA—Richvale, Ontario
Murray Associates, Limited
CANADA—Montreal, Quebec
Creighton & Archibald Ltd.
CANADA, Woodstock, Ontario
Schell Industries Ltd.
CANADA, Supercrete Ltd.
St. Boniface, Man.; Regina, Sask.
PUERTO RICO, Hato Rey
Flexicore Co. of Puerto Rico.

flexicore



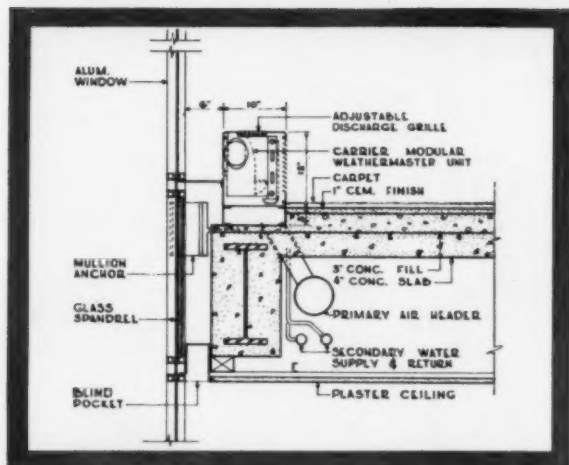
*** Which is the best way
to air condition
an all-glass building?**

That depends on the building. For example, its fenestration and construction are important factors in selecting individual air conditioning units. Carrier meets every variation of these factors with its flexible new Modular Weathermaster* Units. Based on the "building block" principle, they adapt attractively and efficiently to all conditions, provide individual climate control in each room. Only Carrier makes modular units to fit any all-glass building problem. Here are six different modular arrangements—there are many more. For complete information about them, call your nearest Carrier office.

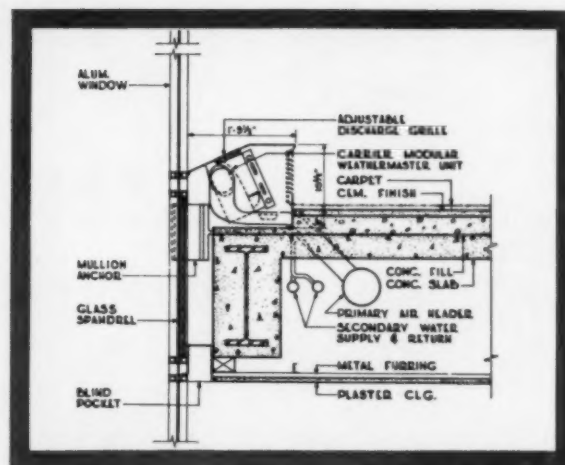


*Reg. U.S. Pat. Off.

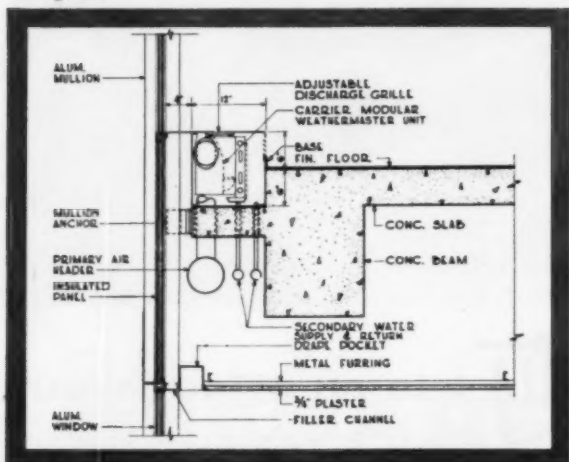
For free booklet describing Carrier Modular Weathermaster Units, ask your nearest Carrier office for 36N-64. Or write Carrier Corporation, Syracuse, New York.



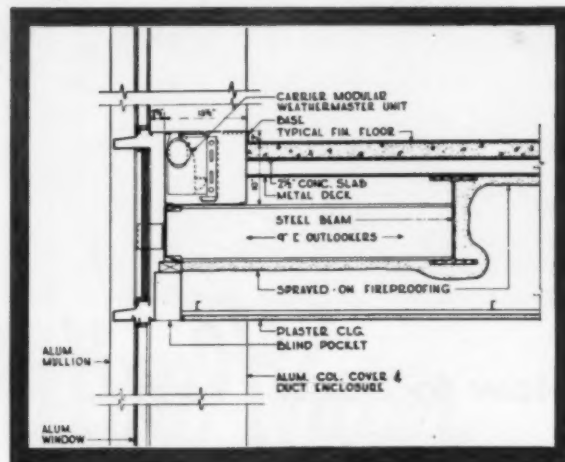
* TYPICAL INSTALLATION WITH STOOL POCKET



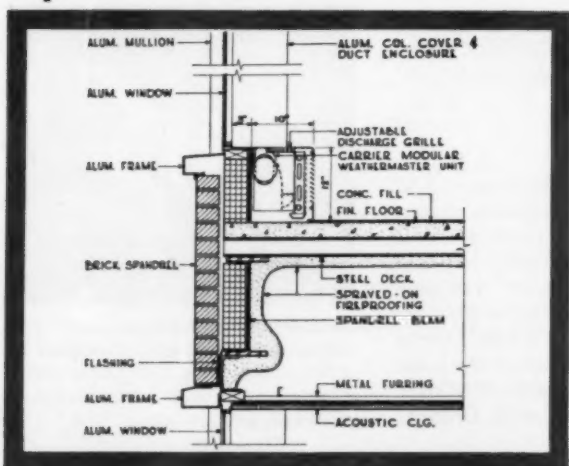
* TYPICAL INSTALLATION WITH SLOPING STOOL



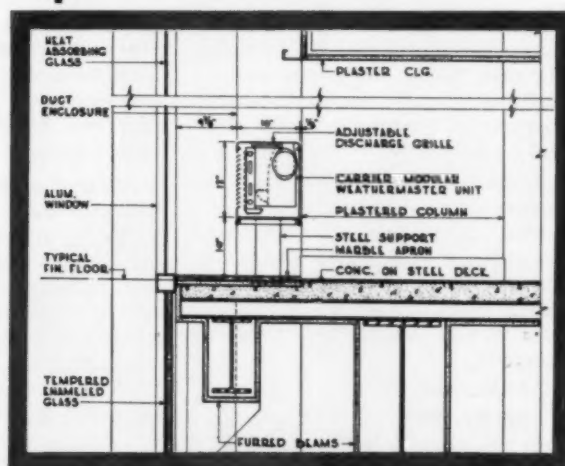
* TYPICAL SEMI-RECESSED INSTALLATION



* TYPICAL RECESSED INSTALLATION

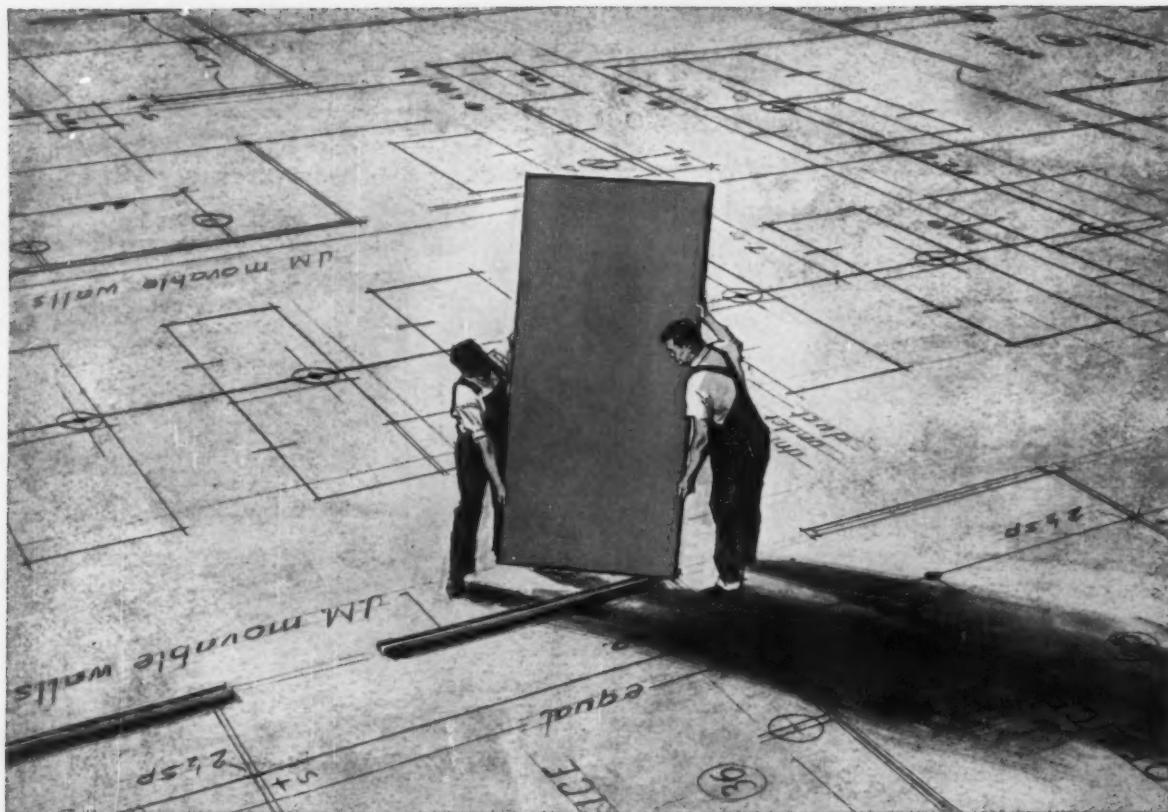


* TYPICAL SURFACE INSTALLATION



* TYPICAL RAISED INSTALLATION

Air and water services to individual Carrier Modular Weathermaster Units may be run horizontally from vertical risers, or they can be fed vertically from sources running horizontally in the ceiling below.



How to build *flexibility* into an office layout

Johns-Manville Asbestos Movable Walls can be quickly changed at will

You can make your offices *completely flexible* with J-M Asbestos Movable Walls. They are readily movable, yet have the stability and appearance of permanent and solid wall construction.

Johns-Manville Movable Walls can be erected, disassembled and re-located time and again—wherever a change in space is required. This time-saving and money-saving flexibility permits quick and economical alterations in size, arrangement or type of layout.

J-M Movable Walls are prefinished in stippled, textured colors of light

green, light tan and light gray, with other solid colors available on order. Their hard, tough finish is scratch and stain resistant. These walls lend dignity and beauty to any type of office interior.

Made of asbestos and cement J-M Movable Walls are fireproof, strong, rotproof and long lasting. Wall changes can often be made in a few days or during a weekend. You save construction dollars. For free brochure "Asbestos Movable Walls," write Johns-Manville, Box 158, New York 17, N. Y. In Canada, write 565 Lakeshore Rd. E., Port Credit, Ontario.



Johns-Manville flush or glazed partitions are furnished and erected by J-M's own Construction Department, complete with doors, door hardware, glass and trim.



Johns-Manville congratulates the American Institute of Architects on its 100th Anniversary.

—Consult an architect—use quality materials.



Johns-Manville

**GYM
SEATS**

Open or Close

**...AT THE FLICK
OF A SWITCH**



MEDART *Moto-Vator*

Mobile Power Operator For Gym Seats

Even the largest Medart telescopic gym seat sections can now be opened or closed by just one person in only a few seconds. Medart's Moto-Vator* will do the complete job without physical effort... safely, quietly and far more accurately than two or three men could do it manually.

The lock-lift arm at the front of this rugged, compact electric power unit is simply guided into an opening at the front of the first row seat without troubling to raise the riser. By merely pressing a switch on the Moto-Vator handle the entire section can be glided open or closed without physical effort. Easy steering guarantees precision trackage. Pneumatic tires insure protection for highly finished floors.

Get the facts on this "must" for every modern gym.

Write today for complete information.



The Moto-Vator 100-foot cord plugs into any 110-volt outlet and it's ready for work.

All Medart Seats installed since 1954 can have the convenience of the new Moto-Vator. Write for details.

*Trademark of Fred Medart Products, Inc.



SPECIFY the best, then INSIST on it!

FRED MEDART PRODUCTS INC. • 3540 DE KALB ST. • ST. LOUIS 18, MISSOURI

Truly modern bank utilizes LIGHTSTEEL design flexibility



ARCHITECT: Robert E. Buchner, A.I.A., Tulsa, Oklahoma
GENERAL CONTRACTOR: H. R. Lohman Company
LIGHTSTEEL SUPPLIER: Patterson Steel Company, Tulsa, Oklahoma



The new Tulsa office of the Ponca City Savings and Loan Association is modern in every detail—from Virginia greenstone surfacing to functional interior, which employs natural filtered sunlight. Its success relies heavily on the architectural freedom afforded by LIGHTSTEEL structural sections.

Because it is a complete framing system with fully integrated components—joists, studs, track and bridging—LIGHTSTEEL imposed none of the limitations of prefabrication. Thus, any number of structural variations were possible.

The variety of collateral materials attendant to the design were easily, speedily attached, thanks to the LIGHTSTEEL nailing groove. Electrical and plumbing work was facilitated, for pipes and wires were run through the carefully engineered openings in the studs. And, of course, LIGHTSTEEL proved more economical than other investigated methods of construction.

Whenever economy must go hand in hand with advanced architectural design, LIGHTSTEEL provides the perfect answer. All the more so since it is available without delay.

Send for technical manual and catalog.

PENN METAL COMPANY, INC.

General Sales Office:
 40 Central Street, Boston 9, Mass.

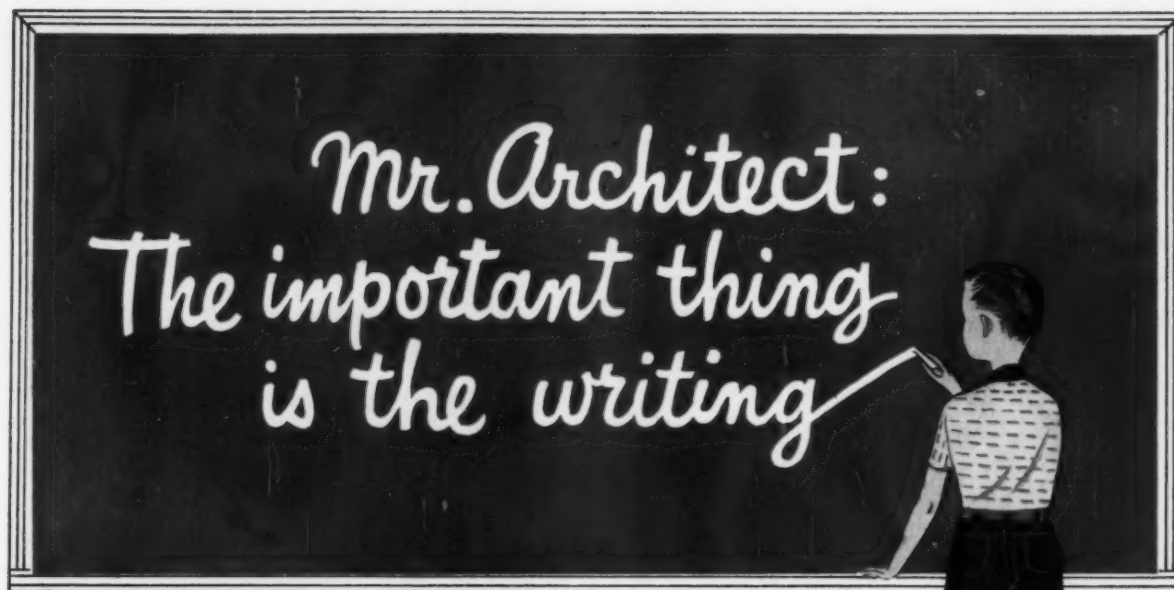
Plant: Parkersburg, W. Va.

District Sales Office: Boston, New York,
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PM-14B

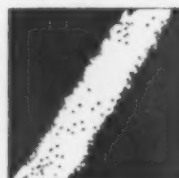
a name to remember



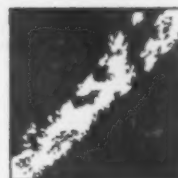
Specify ROWLES CHALKBOARD

■ Rowles offers the finest in chalkboard performance. All Rowles chalkboards have "Velvetone" surface which is glare-free and non-fading, providing greater contrast, better readability and less eyestrain. "Velvetone" surface has no deep pits or high imperfections; eraser completely removes all trace of chalk dust.

Five high quality Rowles chalkboards are available: ENDURAROC, DURABEST, PERMASITE, SUPER PERMASITE AND DUROPLATE. All can be ordered in See-GREEN or standard black. Rowles chalkboards are guaranteed for 10 years against defective materials and faulty workmanship. Complete specifications on chalkboards, aluminum molding and trim, plus installation details can be found in Sweet's Architectural-section 23e/Ro, or by contacting your Rowles Franchised Dealer.



Unretouched photo showing the solid unbroken line on Rowles "Velvetone" surface.



Unretouched photo showing the equivalent marking on a piece of average chalkboard.

Send for a Rowles Sample Kit and make the test yourself.

Write today on your business letterhead or send coupon for free samples of Rowles Chalkboard and tackboard cut from stock. Samples packed in clear plastic box complete with chalk and eraser. E. W. A. Rowles Company, 112 N. Hickory Street, Arlington Heights, Illinois.

- ☐ Please send me Chalkboard-Tackboard Sample Kit.
☐ Please have Rowles Franchised Dealer call.

Name _____

Title _____

Address _____

City _____ Zone _____ State _____



E. W. A. ROWLES COMPANY

112 N. Hickory Street • Arlington Heights, Illinois
 Manufacturers of quality school equipment since 1896



Nicholson Metal Partitions

- ... easy to assemble
- ... modern, clean appearance
- ... ready for immediate delivery

• ADJUSTABLE
• ATTRACTIVE

Available
from stock

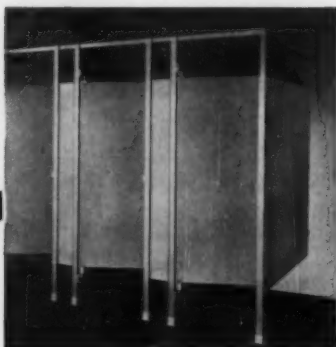
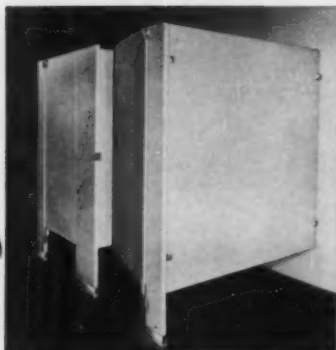
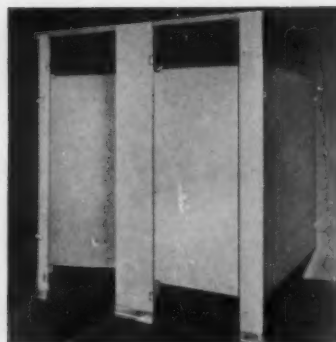


Figure on low installation costs when you specify Nicholson Toilet Compartments. They are designed and constructed for easy adjustment to location contours and quick assembly.

Count on the attractiveness of Nicholson metal partitions—built to enhance the appearance of any washroom. Designs range from ultra modern to rugged utility units.

Specify Nicholson compartments, and have them shipped fast. Nicholson toilet compartments are stocked in

standard styles and sizes for fast "from stock" delivery. Types available are:

Type A—floor braced Type AR—overhead braced
Type B—flush style

manufactured by W. H. Nicholson and Company, 14 Oregon St., Wilkes-Barre, Pa. Sales and Engineering offices in 98 principal cities.

For good-looking, easily-assembled metal toilet partitions, specify ...

N

ICHOLSON

of Wilkes-Barre



NO RUSTY THREADS to worry about with Sherarduct

The threads of Sherarduct are cut *before* galvanizing so that every hill and valley receives the same protective coating of zinc as the tube itself.

And Sherarduct Couplings, the key to a solidly locked, easily fished and thoroughly grounded electrical system, are tapped, then galvanized with the same painstaking care as the Sherarduct itself.

Sherarduct Couplings are carefully designed to permit conduit end to butt in-

side the coupling, giving strength and rigidity to the system and making a smooth, continuous raceway through which conductors can be drawn easily and without injury.

To find out more about Sherarduct's easy fishing, easy bending and lifetime corrosion protection, write for a free copy of the Sherarduct facts book . . . see why Sherardizing makes Sherarduct galvanized conduit at its best.



Sherardizing is Galvanizing at Its Best . . . Sherarduct is Galvanized Conduit at Its Best

National Electric Products

PITTSBURGH, PA.

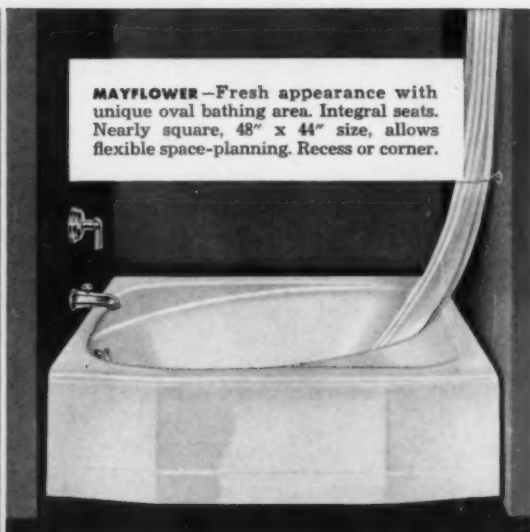
2 Plants • 12 Warehouses • 41 Sales Offices



KOHLER BATHS



COSMOPOLITAN—Luxurious bath of traditional style. 6" bench rim, wide flat bottom, slope end. 4½', 5', 5½' lengths for recess; 4½', 5', for corners.



MAYFLOWER—Fresh appearance with unique oval bathing area. Integral seats. Nearly square, 48" x 44" size, allows flexible space-planning. Recess or corner.



MINOCQUA—Space-saving recess bath of full 5' length—with 4" bench rim, slope end, flat bottom. Trim, low design helps give spacious effect to small bathrooms.



STANDISH—Showering bath—roomy, deep—suitable for bathing. Space-saving for homes, motels, dormitories. Low front for convenient access, easy child bathing.

4 types *fill a wide range of requirements*

Kohler baths afford flexibility of arrangement, choice of style—for bathrooms of any size or shape. All are first quality, with sparkling, easy-to-clean enamel fused to a base of non-flexing iron, cast for strength and rigidity.

KOHLER CO. Established 1873 KOHLER, WIS.

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS





*Pick
any
panel
material*

BROWN & GRIST WINDOW WALLS

delivered as complete units . . . with panels installed at the factory

Specify any variety of panel materials for Brown & Grist Aluminum Window Walls: Asbestos, porcelain enamel, aluminum, ceramic tile—and many others—plain or patterned designs. Brown & Grist can meet your material and design specifications.

Panels up to 2 1/4" thick are sealed under pressure at the factory. That means real insulation and no leakage problems. Send us your requirements. Let our engineers work with you to solve your problems—at no obligation to you! And write for Brown & Grist's Sweet's Catalogs today!

Custom Design at Stock Prices.

Simple, Speedy Erection.

Prompt Shipment.

Light weight—high strength.

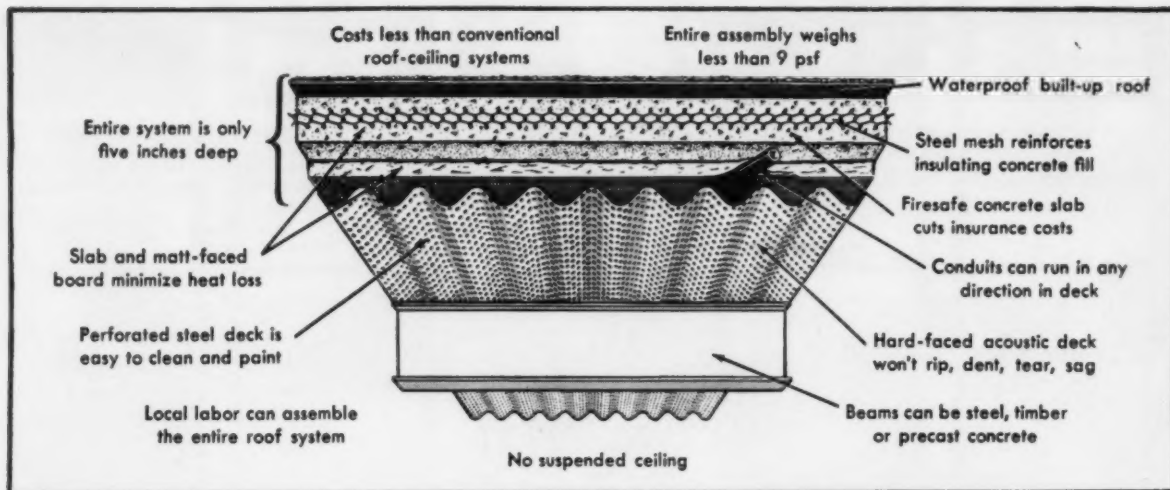
No expert crews needed for erection.

Ideal for schools, churches, small office buildings, general commercial structures.

BROWN & GRIST, INC.



25 TYLER AVENUE, WARWICK, VIRGINIA



New idea in school ceiling-roof construction



5-INCH SYSTEM. A suspended ceiling system usually requires 16" to 20" in depth. Only 5" deep, the Structur-Acoustic system saves 11" to 15" in wall height, saves thousands of dollars in materials and labor.



GOOD ACOUSTICS. Tests conducted by Riverbank Acoustical Laboratories indicate that Structur-Acoustic system with 2½" slab provides Noise Reduction Coefficient of .80. Clean, corrugated underside of Structur-Acoustic reflects light, can be painted to matching color scheme. Hard surface won't dent, stays attractive. Heat loss is kept to minimum with U factor in excess of 0.14. Firesafe system protects both building and contents, helps reduce owner insurance costs.

NEW STRUCTUR-ACOUSTIC DECK MAKES 5-INCH ROOF SYSTEM POSSIBLE

EASY TO ASSEMBLE, USES LOCAL LABOR

A new combination of building materials, the Structur-Acoustic roof system eliminates suspended ceilings, offers one-third more roof for your dollar than conventional school roofs with similar features. Heart of the system is Structur-Acoustic—a galvanized, corrugated, perforated steel sheet that weighs only 2 psf. Strong but lightweight, these high-tensile, tough-temper steel units are easy to handle and place, form a firm structural deck for the ceiling-roof assembly. Entire system can be assembled by local labor—no bulky prefabricated assemblies to ship long distances at high freight rates. For schools, one-story offices, factories, stores—wherever sound control is desirable. For more information, contact Granco home or district office, ATTN: Dept.R-79.



See our catalogs in Sweet's Architectural and Industrial Files

GRANCO® STEEL PRODUCTS COMPANY

A subsidiary of GRANITE CITY STEEL COMPANY

6506 N. Broadway, St. Louis 15, Mo. Executive Offices: Granite City, Ill.

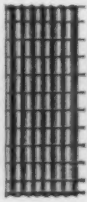
DISTRICT OFFICES: St. Louis • Kansas City • Cincinnati • Dallas • Chicago
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Distributors in 80 principal cities

Granco Products for any type of framing you specify



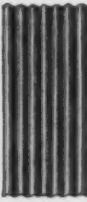
CORRUFORM®



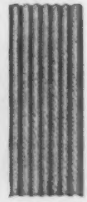
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GRANCO ROOF DECK

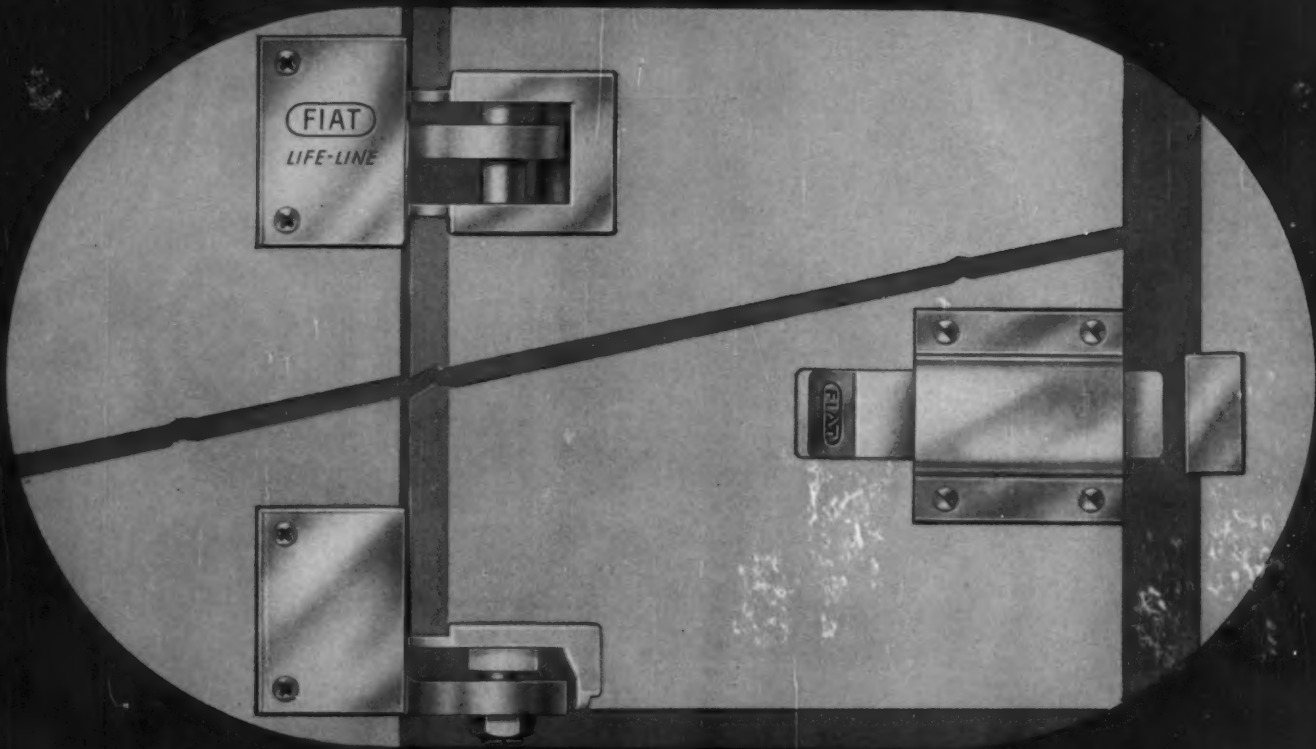


TUF COR®



STRUCTUR-ACOUSTIC

Only **FIAT** TOILET COMPARTMENTS have **LIFE-LINE*** Hardware



made to outlast the life of the installation!

New **LIFE-LINE** TOP HINGE

"Zytel", the wonder nylon resin developed by DuPont, is the bearing surface for the stainless steel pin of this new top hinge. Absolutely will not corrode... simply can't wear out... always operates smoothly and quietly.

New **LIFE-LINE** SIDE BOLT

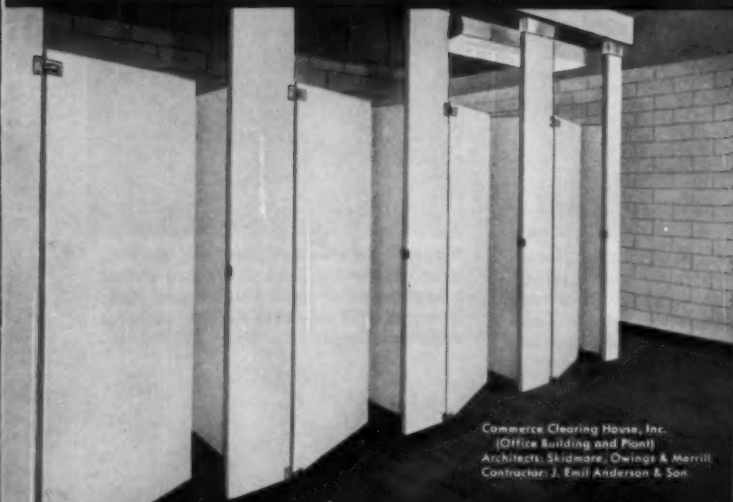
The simplicity of the ingenious FIAT slide bolt and keeper-bumper conforms to the smooth, modern "years ahead" design typical of the entire FIAT compartment line. Easy operating, extra strong for years of service.

New **LIFE-LINE** GRAVITY HINGE

There is a true gravity hinge that has a complete load bearing and cam action surface of Zytel nylon. Concealed entirely in the door... no springs to replace—no undersized ball bearings to wear out—no periodic adjustments to make—no lubrication required.

*U.S. Patent Pending

*U.S. Patent Pending



Commerce Clearing House, Inc.
(Office Building and Plant)
Architects: Skidmore, Owings & Merrill
Contractor: J. Emil Anderson & Son

GET THE COMPLETE STORY! Send for new, colorful catalog that will help you plan all your toilet room installations.

FIAT METAL MFG. COMPANY • 9319 Belmont Ave. • Franklin Park, Illinois

- ☐ Please send me new, fully illustrated catalog #370
- ☐ Please have your representative call.

Firm _____

Address _____

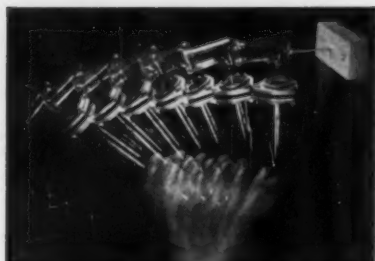
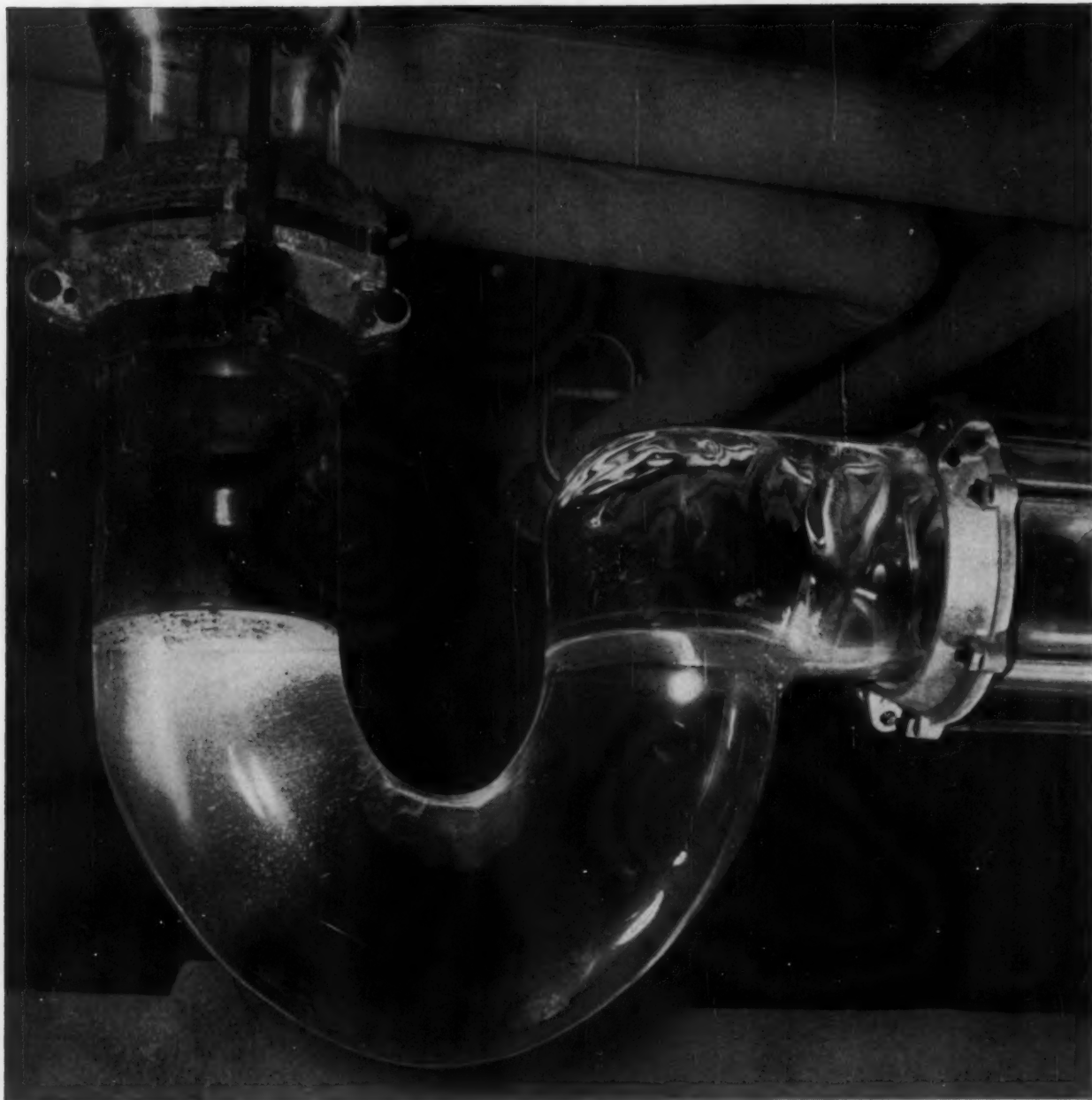
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Individual _____

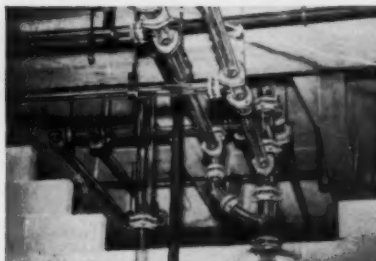
FOUR COMPLETE PLANTS STRATEGICALLY LOCATED FOR BETTER SERVICE, LOWER COST



Long Island City 1, N. Y. • Franklin Park, Ill. • Los Angeles 83, Calif. • Brantia, Ontario, Canada
Manufacturing Quality Showers and Compartments since 1922



It's hammer strong: You can actually hammer nails through a block of wood with PYREX drainline. A new heat-strengthening process makes pipes and fittings $2\frac{1}{2}$ to 3 times as strong as ordinary glass.



It's easy to install: Any plumber can install this drainline. One contractor proved he could make connections with PYREX drainline 16 times faster than bell and spigot connections on metal drainline. All fittings are standard.



It's easy to clean: Even the stickiest chemicals find it hard to cling to PYREX brand chemical glass. Should they stick, a simple acid or steam flushing removes them quickly.

Now...

Glass drainline for laboratories

The modern way to handle corrosive wastes

Here's the way to solve once and for all the problem of choosing a piping material for laboratory drainlines in hospitals, schools, and industrial research laboratories.

Corrosion Resistant

Drainlines made of PYREX® Glass Pipe are resistant to more chemicals than any other piping material. Your client won't be faced with frequent replacement of corroded pipe, ruined ceilings and walls from leakage of corrosive wastes.

Low Cost

PYREX drainlines give you the ideal combination of lowest overall cost coupled with permanent, trouble-free installation. To start with, the pipe is competitively priced. You can often specify one diameter smaller than competitive material because of far less

scale build-up. And you don't need drain plugs.

The real savings begin as soon as you start to install PYREX drainlines. The pipe is lighter, easier to handle, requires only half the supports of conventional metal pipe. Because it's available in long pieces, it requires fewer connections, often only half as many. Just two small wrenches are all it takes to make a joint, no hot lead needed, no tricky expansion joints.

All standard sizes and fittings

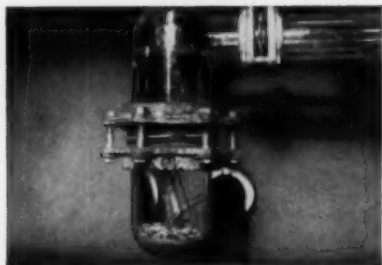
PYREX drainline is available in diameters from 1" to 6". You can get standard sink traps, cup sinks, tees, elbows, crosses, etc., made with the same glass.

You should have the facts about PYREX drainlines in your files. The coupon will bring them to you.



CORNING GLASS WORKS, Corning, New York

Corning means research in Glass



You can see through it: You can always inspect a PYREX drainline and its contents visually. It's not likely to happen, but should something clog the line, you can find its location quickly and exactly.

CORNING GLASS WORKS, 25-7 Crystal Street, Corning, New York

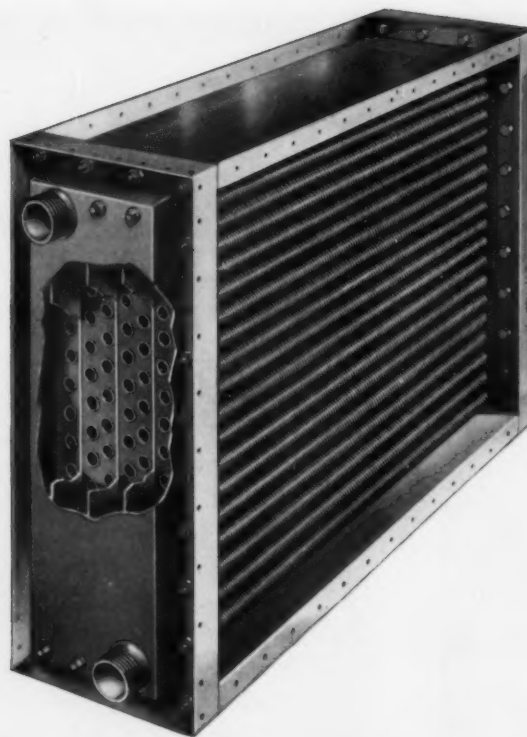
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STREET.....

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AEROFIN

**TYPE R REMOVABLE-HEADER
WATER COILS**

- **Complete Drainability**
- **Easily Cleaned**
- **High Heat Transfer**

Completely drainable and easily cleaned, Aerofin Type "R" coils are specially designed for installations where frequent mechanical cleaning of the inside of the tubes is required.

The use of $\frac{3}{8}$ " O. D. tubes permits the coil to drain completely through the water and drain connections and, in installations where sediment is a problem, the coil can be pitched in either direction. The simple removal of a single gasketed plate at each end of the coil exposes every tube, and makes thorough cleaning possible from either end.

The finned tubes are staggered in the direction of air flow, resulting in maximum heat transfer. Casings are standardized for easy installation.

Write for Bulletin No. R-50.

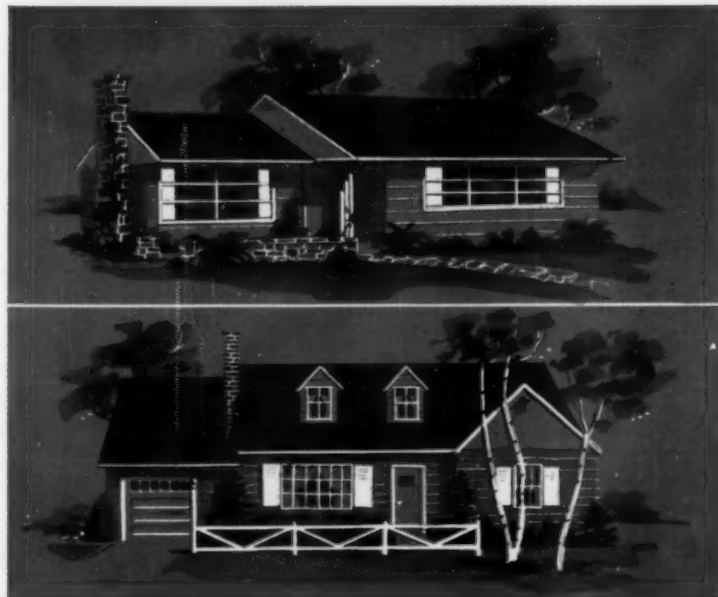
AEROFIN CORPORATION

101 Greenway Ave., Syracuse 3, N. Y.

Aerofin is sold only by manufacturers of fan system apparatus. List on request.

WHAT? HEAT AND COOL A HOUSE FOR \$12 A MONTH?

Yes ... aluminum-clad insulation permits
smaller furnace and air conditioner
... with lower monthly operating costs



Typical examples of average heating and cooling costs for properly insulated and engineered houses in two American cities:

PITTSBURGH, PENNSYLVANIA

Size	1,200 sq ft
Temperature range	Medium
Summer Design Mean temperature...	81°
Typical power rate	2¢/kwh
Cooling costs per year	\$ 23
Heating costs per year	135
	<u>\$158</u>
Average cost per month	\$13.16
Requires ... 2-ton air conditioner	
75,000 Btu furnace	

BIRMINGHAM, ALABAMA

Size	1,200 sq ft
Temperature range	Medium
Summer Design Mean temperature...	85°
Typical power rate	1¢/kwh
Cooling costs per year	\$ 34
Heating costs per year	70
	<u>\$104</u>
Average cost per month	\$8.66
Requires ... 2-ton air conditioner	
75,000 Btu furnace	


The findings of recent Alcoa-sponsored research lead to this startling conclusion: *the average-size (1,200 sq ft) properly built new house with adequate insulation surfaced with Alcoa® Aluminum can be heated and air conditioned throughout the year for as low as \$12 a month.* Operating costs vary slightly according to climate, of course, but the figure \$12 is an average for the entire United States. See two typical examples illustrated.

What does this mean for you, the builder? Adequate aluminum-clad insulation cuts the cost of heating and cooling equipment at least 25%. Here's a real competitive advantage. Now central air conditioning is within the reach of the popular-price home buyer.

What does this mean for your customers? During winter, aluminum-clad insulation keeps furnace heat *in* to cut fuel expense. During summer, it is the most effective insulation known for keeping *out* radiant heat. This means year-round comfort . . . in a care-free home that costs less to heat and cool.

Alcoa's new book about insulation, *Comfort Everybody Can Afford*, has been written especially for builders. Its valuable information will help you sell better homes . . . faster. Mail the coupon today for your copy.

ALCOA does not make insulation of any kind, but Alcoa Aluminum Foil is used by many manufacturers to produce several types of insulation.


THE ALCOA HOUR
TELEVISION'S FINEST LIVE DRAMA
ALTERNATE SUNDAY EVENINGS



Aluminum Company of America, Industrial Foil Division
1611-G Alcoa Building, Pittsburgh 19, Pennsylvania

Gentlemen: Please send my free copy of your new book about insulation: *Comfort Everybody Can Afford*.

Name _____ Title _____
Firm _____
Street _____
City _____ Zone _____ State _____

Forecast

for superb
interior styling

...the new
pattern beauty in

TEXTURED
Masland Duran

Vinyl upholstery with ELASTIC FABRIC BACK

This is Forecast... a distinctive departure from the generally static designs of most conventional upholstery materials. And such fresh, colorful beauty is what clients expect in Masland Duran, for they know that this is no ordinary upholstery. It's practical vinyl... durable, comfortable and easy to keep clean with soap and water. Write for samples of Forecast and other Masland Duran textured patterns. The Masland Durableather Co., Dept. 36, Phila. 34, Pa.





and Feel the Cushioned
Flex of KREOLITE
Gym Floors

While many factors contribute to Kreolite's durable beauty, its resiliency is one of its most outstanding qualities. Kreolite Flexible Strip End Grain Wood Block Floors actually feel resilient, and they resist wear that would quickly age other type flooring.

This resilient feature helps to cushion feet, lessens fatigue and being splinter-proof, Kreolite gym floors are safer.

Whether you are replacing an old floor in a gym, for a multi-purpose room or school shop, or planning flooring for a new building, get all the facts on Kreolite's many money saving advantages . . . Write Today.

KREOLITE FLEXIBLE STRIP
END GRAIN FLOORING

THE
JENNISON-WRIGHT
CORPORATION
TOLEDO 9, OHIO

Here's how
**WOODWARD
 IRON COMPANY**
 is helping sell
**CAST IRON
 PRODUCTS**

More than
35,000,000
 Reader Messages
 this year!

A FULL PAGE IN FULL COLOR in House and Garden's Book of Building, Spring-Summer Edition, reaching 150,000 prospective home owners!

THREE QUARTER-PAGES in LIVING for Young Homemakers, reaching more than 2,000,000 readers monthly!

TWO QUARTER-PAGES in Better Homes and Gardens, reaching more than 14,000,000 readers monthly!

These advertising messages are telling some of the nation's best building prospects about the long-time economy and protection of specifying *permanent* Cast Iron Products throughout. It's a hard-hitting campaign designed to make the builders' and contractors' selling job easier.

As we carefully explain in the advertisements, Woodward does not operate Cast Iron foundries, but supplies quality pig iron to the nation's leading gray iron foundries.

WOODWARD IRON COMPANY
 WOODWARD, ALABAMA



Now!

CHOOSE FROM A RAINBOW

OF COLOR IN LIGHTING!

*A wide choice of colors,
diffusing media and shapes
available in one ceiling system
for complete aesthetic
freedom in lighting design*



View of test ceiling at our plant.

Electro Silv-A-King **LUMENAREA** ceiling system

The simplest, most versatile installation system ever developed!

Here is the world's first large area lighting system that gives you practically unlimited variety of form, as well as color and diffusing media. Now you can design lighting layouts, from the conventional to the abstract, curved or straight in any combination of louver, molded forms, glass and accent lighting . . . in soft pastel pink, blue, green and white . . . in a ceiling completely free of any visible screws, bolts or mechanical devices.

And with all that, the new Electro Silv-A-King LumenArea System, incorporates Slide Adjustment and Adjusto-Lok hanging devices which adjust for spacing and depth without tools!

Design of our Overlap Polycube™ (louver fits cube), on 2-ft. wide modules eliminates the necessity for crossbars, regardless of how long the run . . . also provides 45" x 45" shielding for optimum seeing comfort.



Dished plexiglas ceiling with perimeter of green "Polycube" Louvers helps give this office a distinctive appearance.

For your Free Specification and Data Bulletin, write to:

Electro Silv-A-King Corporation, 1535 SO. PAULINA ST., CHICAGO 8, ILL. • SPRUCE & WATER STS., READING, PA.

Architects delighted with

FRY 3-D

Shado-
Bilt

dramatic new roof-effect!

New FRY 3-D has natural slate dark colored top strip, with tabs in your choice of 13 gorgeous colors. When brightly colored tabs overlay dark slate strip, the black showing through the tab cutouts makes the shingles look 3 times thicker. Roof has wonderful massive appearance!



290-LB. ASPHALT SHINGLE ROOFING FULL-VALUE BONDED For 20 Years!

Today's decorative trend in roof effects seems to be toward a more rugged, massive appearance.

Fry achieves this effect most dramatically because of Fry's unique tab cut-out, which is a full $\frac{3}{4}$ " wide.

As explained in panel above, this strongly accentuates the shadow line, giving a distinctive shingle outline on the roof. "Beauty is as beauty does," however, and we cannot too strongly emphasize the importance,

to you and your clients, of the Fry FULL-VALUE 20-Year Bond. Unlike other roofing bonds, or "penal bonds," this covers cost of labor and materials (not materials alone) in the event of specified roof failures. Surely, you yourself, as well as your clients, deserve this complete protection!

For condensed specifications, see Sweet's 1957 Industrial Construction File: 4 a/Fr—or write us TODAY for complete details and specimen bond.



LLOYD A. FRY ROOFING COMPANY

World's largest manufacturer of asphalt roofing and allied products—
19 roofing plants strategically located coast to coast

GENERAL OFFICES: 5818 Archer Road, Summit (Argo P.O.), Illinois



Fenestra
ACOUSTICAL DESIGN
NEWS

Fenestra Acoustical Holorib gives you a*

LOW-COST STRUCTURAL ROOF WITH "BUILT-IN" NOISE CONTROL!

The science of proper noise control has a place fully as important as heating, lighting and ventilation in modern buildings. Production noise cuts deeply into worker efficiency. It wears on the nerves, reduces output, causes accidents and increases labor turnover. It may also be the cause of expensive disability claims.

Fenestra Acoustical Holorib gives you an ideal, low-cost solution to industrial noise control. Combines finished acoustical ceilings, structural roof deck, and thermal insulation. It is quickly and easily erected. Total cost, installed, may be as little as 75 cents per square foot.

Made of 18-gauge steel—thicker than usual metal

pan ceilings—Acoustical Holorib resists damage and is easy to maintain. The smooth perforated surface may be washed or painted as frequently as needed without reducing acoustical efficiency. There is no "stuck-on" material that may be damaged under production conditions. Flaking or "drop-offs" are eliminated.

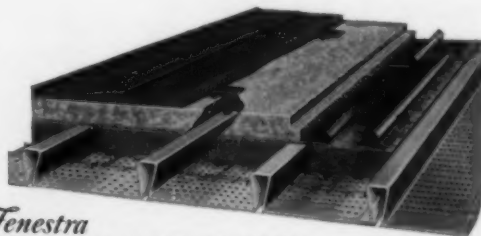
If you are now planning a new industrial building or warehouse, you should get complete information on Fenestra Acoustical Holorib roofs. For your FREE copy of the 1957 *Fenestra Building Panel Catalog*, call your local Fenestra representative or write Fenestra Incorporated, Dept. AR-7, 2252 East Grand Blvd., Detroit 11, Mich.

*Trademark

Fenestra
INCORPORATED

ACOUSTICAL
HOLORIB
ROOF DECK

Your Single Source of Supply for
BUILDING PANELS • DOORS • WINDOWS



Fenestra
ACOUSTICAL HOLORIB ROOF

NRC — .80. Width, deck sections — 18". Heat Transmission Loss — 0.15 BTU (U factor) with 1" rigid insulation. Additional insulation may be added if required.

**Fenestra
saves you
up to \$100
per door
with this**



NEW CUSTOM DESIGNED



Here's a door designed especially for school classrooms. It looks expensive, but it isn't. It's a stock door by Fenestra®—with an installed cost about \$100 less per opening than you'd expect to pay.

What's outstanding about this door? First, the hardware. The new anodized aluminum pull-push plate makes it easy to open for even the smallest child. It's locked from the outside with a key. A thumb turn on the inside will open the door if a child should be locked in by mistake. An automatic door closer and inside kick plate are also included. Now, look at the glazing. Two panes of patterned glass with one pane of clear glass gives classroom privacy with a view window at eye level.

Architect Glen Drew, Poplar Bluff, Missouri, uses Fenestra Hollow Metal Door-Frame-Hardware Units for custom quality at stock door costs. O'Neal School, Poplar Bluff, Missouri, has 42 Fenestra Flush Doors. Contractor: George H. Gassman Construction Co., Poplar Bluff, Missouri.



Fenestra
SCHOOL DESIGN
NEWS

SCHOOLROOM DOOR

The door itself is a Fenestra Hollow Metal Flush Door that can't warp, swell, stick or splinter. It always swings open smoothly and closes quietly. Thousands of these doors are in use in schools all over the country.

This classroom door costs you less to buy and install because Fenestra mass produces them on special jigs that save expensive labor. Then the doors, complete with frames and hardware, are delivered to your school

ready to install. You don't have to cut, fit, mortise, drill or tap a Fenestra Door. It's factory machined for all hardware, either template or surface mounted. *One man with a screw driver can install it in minutes!*

Before you choose the doors for your next school, call your local Fenestra Representative—listed in the Yellow Pages—for complete information on this New Fenestra Classroom Door, or mail the coupon below.

Fenestra
INCORPORATED

HOLLOW METAL
DOOR-FRAME-
HARDWARE UNITS

Your Single Source of Supply for
DOORS • WINDOWS • BUILDING PANELS

Fenestra Incorporated
AR-7, 2252 East Grand Boulevard
Detroit 11, Michigan

Please send me complete information on Fenestra Hollow Metal Door-Frame-Hardware Units for schools.

NAME _____
FIRM _____
ADDRESS _____
CITY _____ STATE _____



Even beside the Sea...

Fenestra FENLITE Windows NEED NO PAINTING

Constant exposure to salt air can eat away most metals. But it doesn't faze the finish on Fenestra® FENLITE Industrial Steel Windows.

FENLITE is an amazing new process that completely protects the steel. Fenestra Steel Windows with FENLITE never need painting. Yet they cost no more than ordinary steel windows with two-coat field painting.

Industry from coast to coast is installing Fenestra FENLITE Steel Windows to protect new plant investment money. And firms with established buildings are finding it wise to replace present windows with Fenestra FENLITE to substantially lower window maintenance cost. They estimate their savings in painting and maintenance costs will quickly pay for the new windows and eliminate future problems and expense.

It takes eight separate steps, completely controlled with electronic precision, to complete the exclusive

FENLITE process. A lifetime zinc "surface" actually becomes part of the basic steel structure of the windows. Then a special treatment "passivates" and chemically polishes the zinc for even longer life and a gleaming, attractive finish. When put to the toughest test of standard 20% salt spray exposure, this treatment resists the start of corrosion 3 to 12 times longer than ordinary zinc "coating."

FENLITE also prepares the window for a tight glazing compound bond and for decorative painting, if you desire.

An illustrated-in-color brochure is prepared to fill in the details on FENLITE for you. Why not call



Fenestra's nearest representative today? He is listed in the Yellow Pages. Have him visit you at your convenience and bring a sample of FENLITE Finish for your close inspection or mail coupon below.

The Fenestra FENLITE Finish is also available on the complete line of Fenestra Intermediate Steel Windows for schools, office buildings and other fine structures.

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INDUSTRIAL
STEEL WINDOWS

Your Single Source of Supply for
DOORS • WINDOWS • BUILDING PANELS

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CITY STATE

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RED CEDAR

KNOTTY PINE

For beautiful interiors
or for structural uses...
A WIDE VARIETY OF

Weyerhaeuser 4-Square Plywoods

Decorative plywood panels provide an easy, economical method of giving enduring charm to the interiors of modern homes and offices. Today Weyerhaeuser 4-Square plywoods are available in a range of species and patterns for beautiful rooms as well as for structural uses.

Weyerhaeuser 4-Square Lumber Dealers are in a position to offer architects a selection of veneered plywoods, such as **KNOTTY PINE GRUVE-PLY, FLUSH KNOTTY PINE, PONDEROSA**

PINE, and INLAND KNOTTY CEDAR.

...and Weyerhaeuser 4-Square fir plywoods including **SANDED GRADES, SCARFED, HANDY PANELS, SHEATHING, UTILITY TOPS and BASES, and MARINE.**

For helpful detailed information covering this interesting line of decorative and utility plywoods, we suggest that you contact your local Weyerhaeuser 4-Square Lumber Dealer, or write us for descriptive literature.



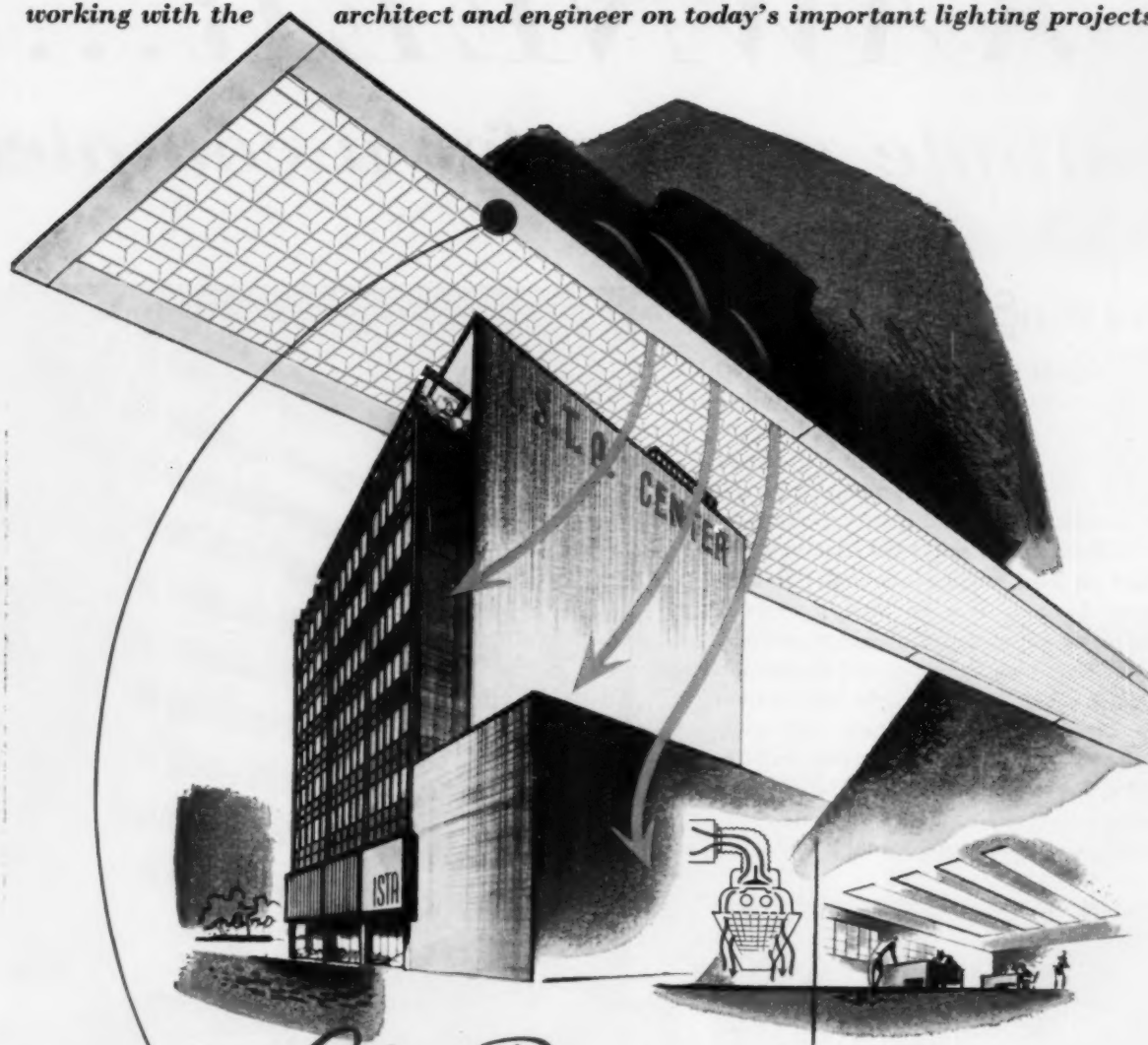
WEST COAST HEMLOCK—one of the variety of species—is often called the "Ability Wood" because it is so versatile, serving dependably for framing and sheathing as well as for flooring, siding, molding, and other finish uses.

WEYERHAEUSER

4-SQUARE

WEYERHAEUSER SALES COMPANY • ST. PAUL 1, MINNESOTA

working with the architect and engineer on today's important lighting projects



1 mile of *Ceiling Beauty* **doing double duty**

both lighting and air conditioning from one fixture!

INDIANA STATE TEACHERS ASSN. CENTER—
over a mile of Multi-Vent Trofferlites helps to
make it Indianapolis' newest, most
modern office building.
Architects: MCGUIRE & SHOOK AND ASSOCIATES
Consulting Engineers: J. M. ROTZ ENGINEERING CO.
General Contractor: LESLIE COLVIN
Electrical Contractor: HATFIELD ELECTRIC CO., INC.
Heating and Plumbing Contractor:
FREYN BROTHERS, INC.
—all of Indianapolis, Ind.
B-171

These new double-duty fixtures bring a new freedom to creative architecture. Gone is that discord of fixtures and air outlets! Instead: clean-lined, uncluttered ceiling beauty. Air outlets are engineered right into the lighting system! Result: greater economy, comfort and ceiling beauty. No double installation problems . . . improved draft-free air diffusion . . . modern, well-diffused, high efficiency Benjamin troffer lighting. Free illustrated brochure brings you the whole fascinating story of this new 2-in-1 fixture. Write: Benjamin Electric Mfg. Co., Dept. Q-1, Des Plaines, Ill.

MULTI-VENT TROFFERLITES
Multi-Vent® Air Diffuser by Pyle National Co. • Trofferlite by Benjamin Electric Mfg. Co.

BENJAMIN

...always the **B** source of good lighting

KAWNEER...

A single source for a complete



CUSTOM FABRICATED

ANALYSIS AND ENGINEERING

—The Kawneer engineering team considers every curtain wall application as unique. Each is subjected to a searching analysis.

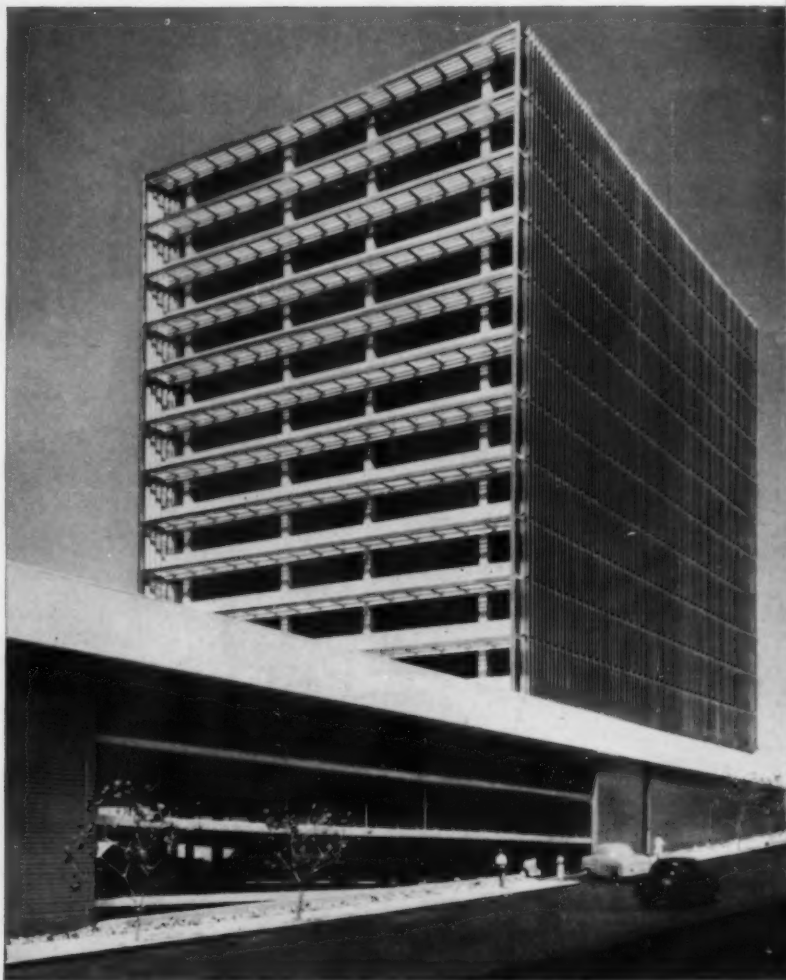
Such points as (1) the curtain wall's effect on load bearing elements, (2) adequate accommodation for wall movement due to wind load and temperature change, (3) weathering features and (4) integration of all components within the wall system are the subjects of careful study. The result of this careful analysis is a curtain wall design that provides the highest standards of performance while retaining the most expressive appearance of the architect's design.



Imperial Oil Company, Sarnia, Ontario, Canada
Arch.: John B. Parkin Assocs., Sarnia

FABRICATION—Kawneer modern fabricating facilities and flexibility of production assure you of the most effective execution of your metal wall requirements. Whatever finish or material, whatever performance demands you make, Kawneer will provide the answer in its metal wall system.

INSTALLATION—Kawneer takes complete responsibility for engineering, fabrication and installation . . . assurance that your curtain wall will perform to your complete satisfaction.



Tishman Building, Los Angeles, Calif. Arch.: Victor Gruen Assocs. Arch. & Engr., A.I.A.

Guarantee Mutual, Omaha, Nebraska. Arch.: Leo A. Daly, Arch. & Engr. Contr.: Peter Kiewit Sons Co.



Mutual Benefit Life Insurance Co., Newark, N. J.
Arch.: Eggers & Higgins, F.A.I.A., Newark
Gen. Contr.: Geo. A. Fuller, New York City



curtain wall system

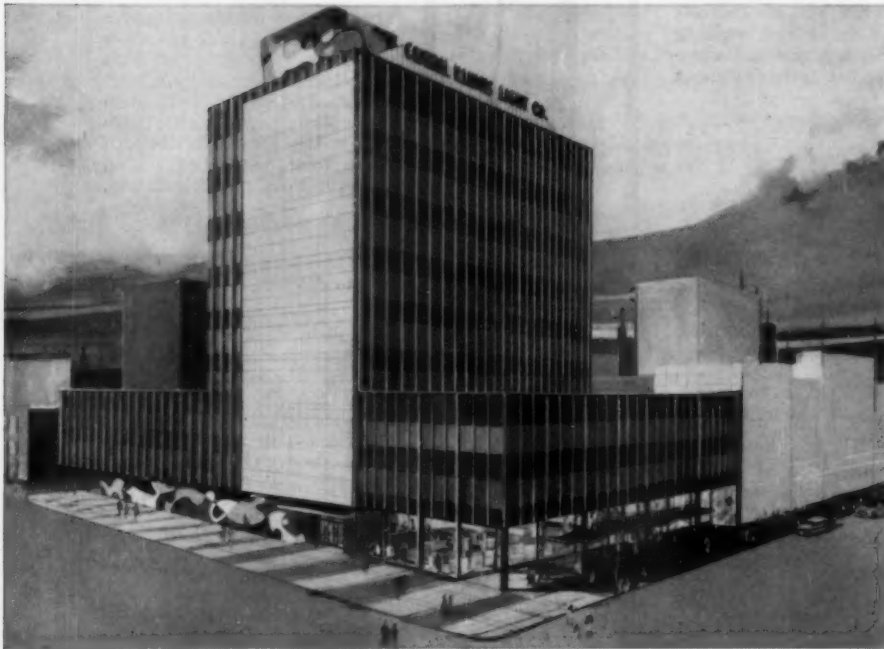


BROAD PRODUCT RANGE—COMPREHENSIVE SERVICE

Kawneer as a single source for curtain wall means high quality units are available in aluminum, stainless steel or porcelain finish. You have a selection of roll formed, brake formed or extruded shapes. Specially designed operating sash with neoprene or vinyl weather seal or fixed glazing can be used. Insulated sandwich panels, custom-engineered sun con-

trol devices can be adapted to any job. The finest aluminum entrance units and aluminum or vinyl covered flush doors are also available.

Kawneer is your best single source for curtain wall components. Kawneer metal wall engineers will assist you to design, detail and specify curtain walls that will maintain your high standards of design and construction.



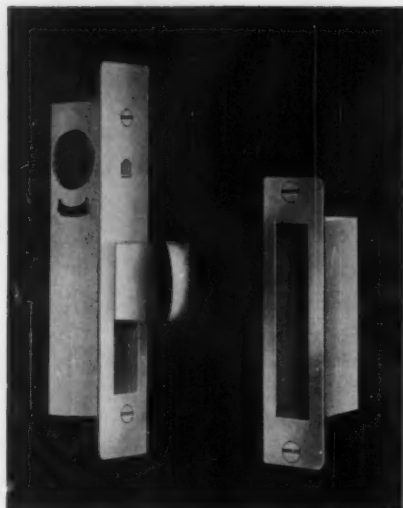
Central Illinois Light Company, Peoria, Illinois. Gregg & Briggs, Architect and Engineer. General Contractor: V. Jobst & Son



Equitable Life Insurance Bldg.
San Francisco, Calif.
Arch.: Loubet & Glynn, San Francisco
Consultant Arch.: Irwin Claven, New York City

Geigy Chemical Co.,
Greenburg, N.Y. Arch.: Skidmore, Owings & Merrill, NYC. Contr.: Vermilya-Brown, NYC





Maximum Security Narrow Stile Locking Devices

For New or Replacement Installations

Whether you specify, install, or sell narrow stile locking devices, you can be confident that Adams-Rite offers the utmost in design, construction, simplicity and safety. Check these advanced ideas that insure top performance and lasting customer satisfaction:

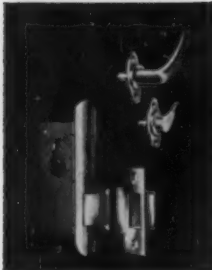
Illustrated above — Maximum Security 1850 Deadlock:

This is the unit that provides Maximum Security for modern narrow stile swinging glass doors. The pivoted bolt actually bridges the opening with a bar of steel, retaining as much bolt within the lock stile as is projected. Its protection is so great that forced entry is impossible without destruction of the door itself.



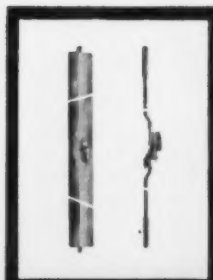
970 Minimum Backset Deadlock:

This unit provides economical deadlocking for rigid narrow stile swinging doors. Like all Adams-Rite narrow stile locks, the 970 Series operates with standard mortise type cylinders of any make.



1450 Deadlocking Latch:

Traffic control is made possible in a narrow stile swinging door entrance by use of the 1450 Series Deadlocking Latch. Two-way traffic flow or restricted entrance is achieved by a simple selector. Ideal for any public area with a closing-hour problem, such as banks, markets, apartment houses, etc. It satisfies building and safety regulations.



MS 1849 Two-Point Door Bolt:

The modern method for locking the inactive door of a pair of narrow stile doors. Top and bottom bolts are locked or unlocked by natural operation of an attractive turn conveniently located on the inside surface. Positive deadlock of both doors is automatically provided when cylinder deadlock is thrown.



1848 Deadlock for Narrow Stile Sliding Glass Doors:

Every sliding glass door deserves the same protection demanded of any other exterior door. The 1848 gives security with an adjustable heavy hook type bolt with which turn and cylinder controls are used. For added safety, the bolt collapses if the door is accidentally shut while bolt is projected.



1340 Series, Deadlock and Latch:

Combination deadlock and latch for narrow stile swinging doors. A simple selector changes the unit from free swinging to latch action. The positive latch action helps prevent air losses when temperature control systems are used.

Specify, Sell, Install the Finest

ADAMS-RITE

MANUFACTURING COMPANY

540 West Chevy Chase Drive, Glendale 4, California • Dept. AR-77

Specialists in Narrow Stile Locking Devices

OPERATION HOME IMPROVEMENT

MADE EASIER WITH

Streamline®

**COPPER TUBE AND
FITTINGS**

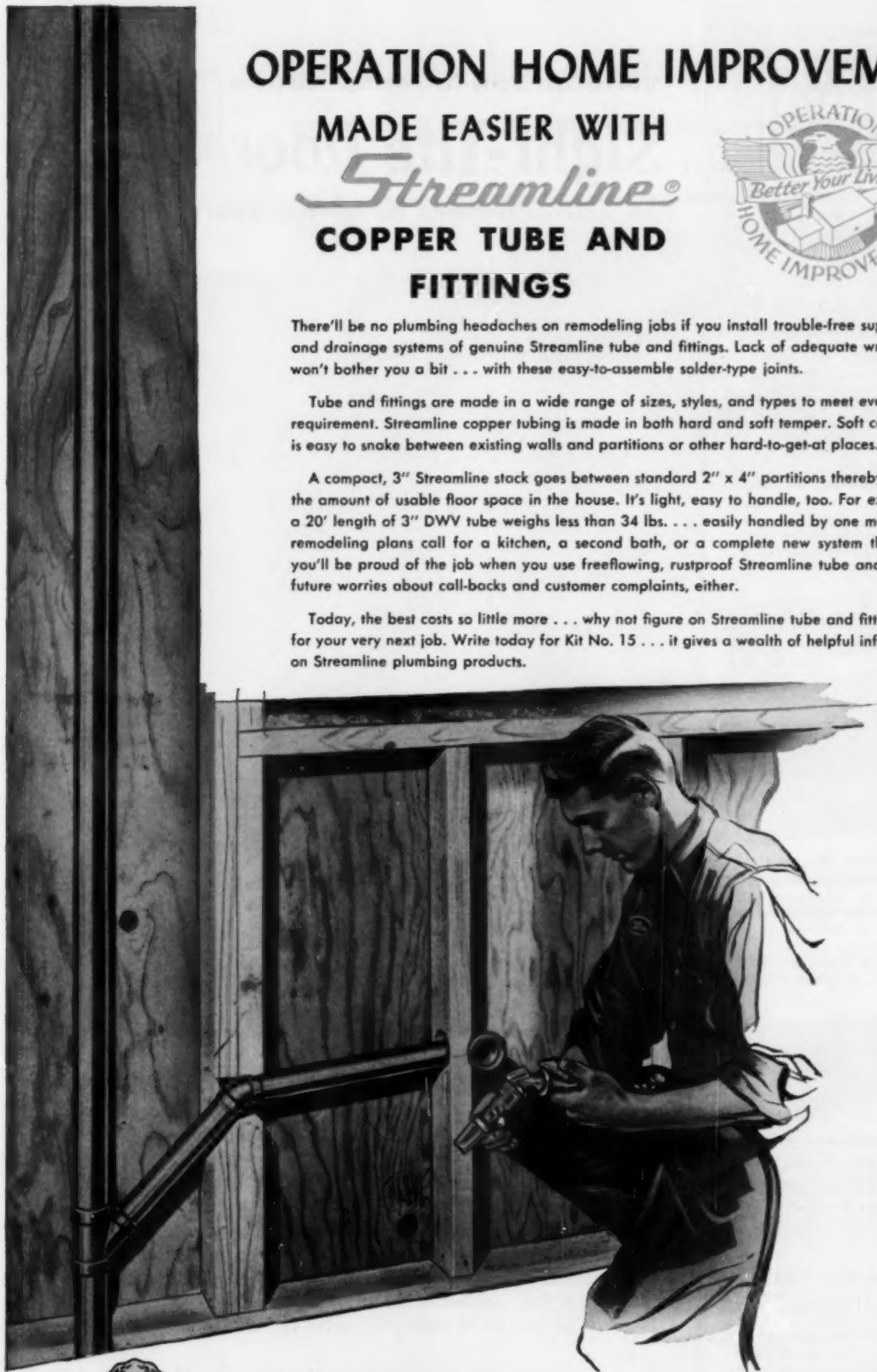


There'll be no plumbing headaches on remodeling jobs if you install trouble-free supply and drainage systems of genuine Streamline tube and fittings. Lack of adequate wrench space won't bother you a bit . . . with these easy-to-assemble solder-type joints.

Tube and fittings are made in a wide range of sizes, styles, and types to meet every requirement. Streamline copper tubing is made in both hard and soft temper. Soft copper tubing is easy to snake between existing walls and partitions or other hard-to-get-at places.

A compact, 3" Streamline stack goes between standard 2" x 4" partitions thereby increasing the amount of usable floor space in the house. It's light, easy to handle, too. For example: a 20' length of 3" DWV tube weighs less than 34 lbs. . . . easily handled by one man. Whether the remodeling plans call for a kitchen, a second bath, or a complete new system throughout, you'll be proud of the job when you use freeflowing, rustproof Streamline tube and fittings. No future worries about call-backs and customer complaints, either.

Today, the best costs so little more . . . why not figure on Streamline tube and fittings for your very next job. Write today for Kit No. 15 . . . it gives a wealth of helpful information on Streamline plumbing products.



MUELLER BRASS CO. PORT HURON 8, MICHIGAN

THE MARK OF QUALITY



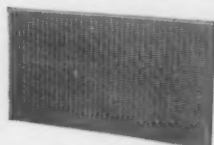
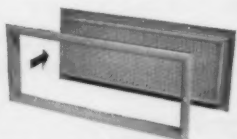
Uni-Flo

ENGINEERED AIR
DISTRIBUTION



UNI-FLO MODEL ED GRILLE

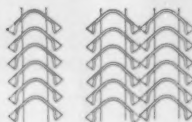
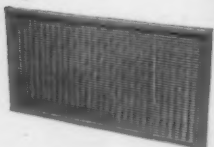
Rugged construction with frame for both sides of door. Telescoping design shown below permits use with doors from 1 7/8" to 2" thick.



SIGHT-TITE CORE ONLY

In specific sizes to meet individual requirements, and convenient stock sizes which may be custom-cut by the contractor.

UNI-FLO MODEL AF GRILLE, below, has simple U-Moulding.



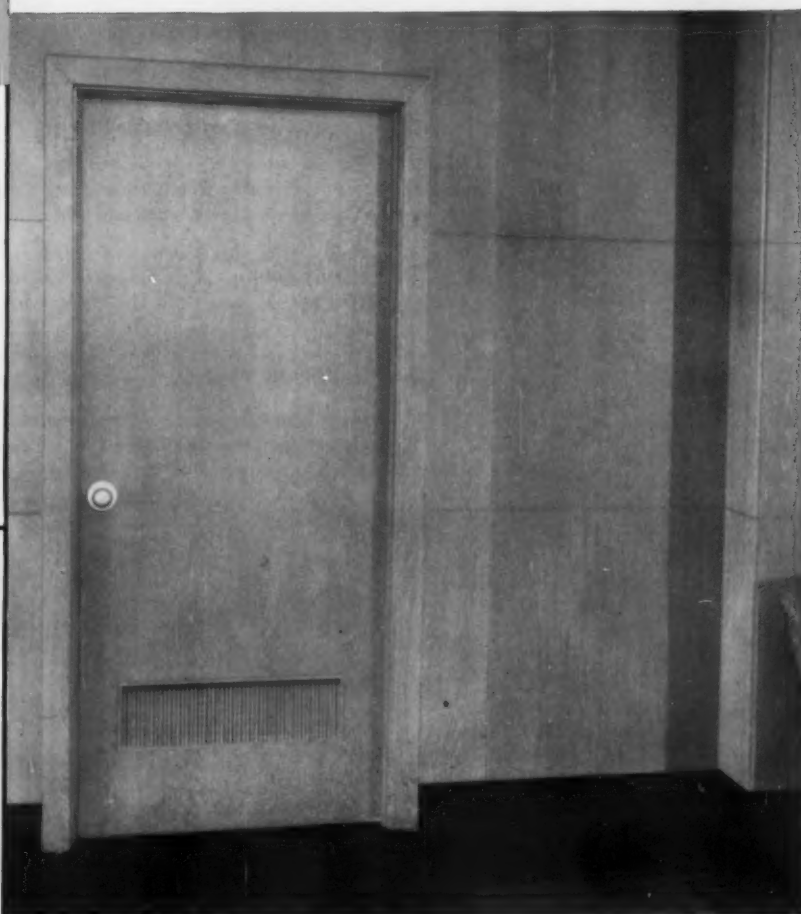
Sight-Tite Light-Tite

Core cross section at left shows Uni-Flo Sight-Tite Grille. Cross section at right shows Light-Tite installation for photographic darkrooms and laboratories.

visionproof, inconspicuous

Sight-Tite Door Grilles

to complement contemporary interiors



Handsome and strong Uni-Flo Sight-Tite Door Grilles provide free air movement for offices, dressing rooms, locker rooms, school rooms, and other areas, without unsightly "see-through" gaps. Because of their inherent extra strength, Uni-Flo Sight-Tite Door Grilles withstand scuffing and kicking. Rattleproof construction also contributes to a finer installation. Available with six standard baked enamel and electroplated finishes, or special baked enamel finishes to match any color. With frame, or as core alone, in wide range of sizes to meet your job requirements. See your nearest Barber-Colman Field Office, or write for catalog.

BARBER-COLMAN COMPANY

Dept. S, 1104 Rock Street, Rockford, Illinois

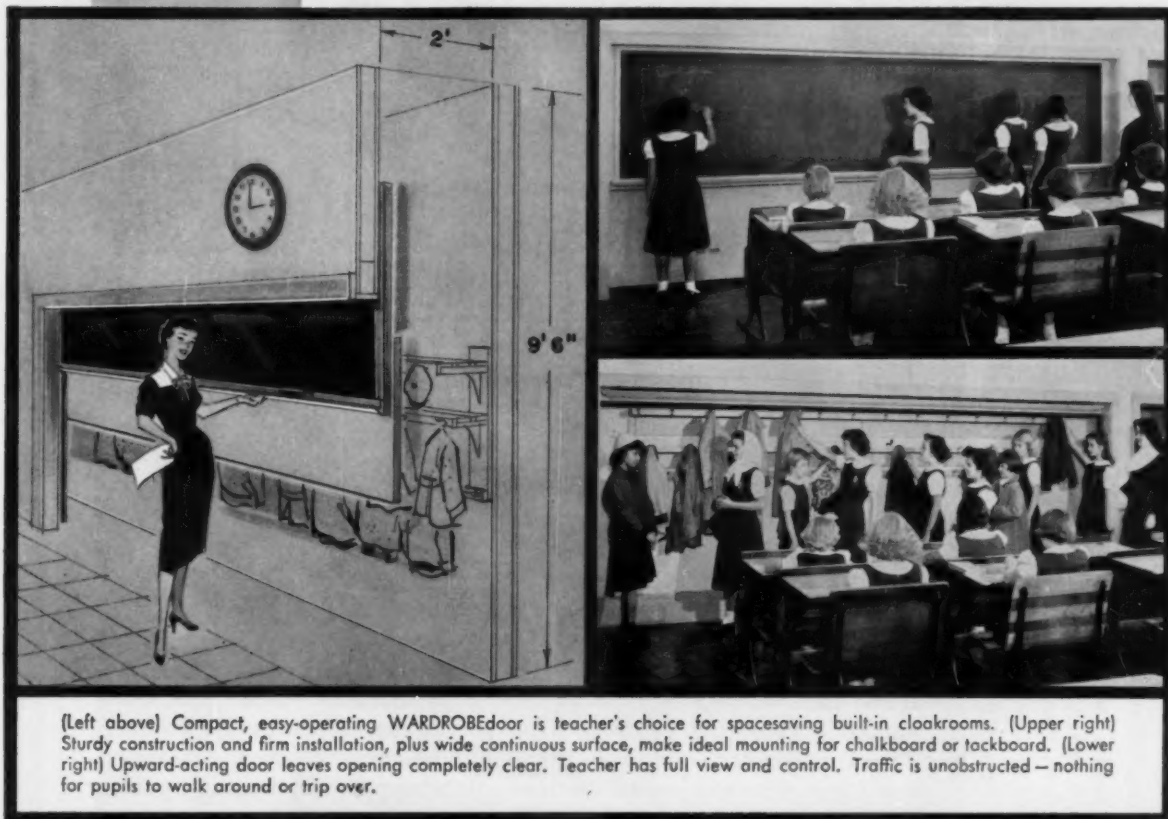
THE MARK OF QUALITY



New easy-operating

Barcol WARDROBEdoor only \$240*

Free -- Complete Manual now ready; send for yours!



(Left above) Compact, easy-operating WARDROBEdoor is teacher's choice for spacesaving built-in cloakrooms. (Upper right) Sturdy construction and firm installation, plus wide continuous surface, make ideal mounting for chalkboard or tackboard. (Lower right) Upward-acting door leaves opening completely clear. Teacher has full view and control. Traffic is unobstructed — nothing for pupils to walk around or trip over.

Here are the advantages teachers need in a low-cost classroom wardrobe

Important features of the new Barcol WARDROBE-door are based on actual interviews with teachers in a range of localities. Here are the advantages teachers say they *need* for efficient classroom management.

Spacesaving upward action. Classroom side of WARDROBEdoors is fully usable wall space. And, *open or closed*, the complete wardrobe requires only 2 ft depth, yet provides ample room for coats, footwear, books. Class has full use of contingent floor space at all times. Teachers say exposed coat-racks and other types of wardrobes often create traffic problems and limit desk placement in the surrounding area.

Easy operation. Precision engineering of counter-balanced action gives fingertip control. Teacher or pupil raises and lowers new WARDROBEdoor with complete ease.

Double utility. Upper section of WARDROBEdoor offers unbroken mounting surface for chalkboard, chalkrail, and tackboard. Firm, sturdy construction

completely eliminates rattle when chalkboard is in use. WARDROBEdoors *save* on building costs, *add* to room efficiency.

Full access and control. Open, WARDROBEdoors offer *no* obstruction to pupil traffic or teacher's visibility and control. Many teachers prefer WARDROBEdoors for this reason. Absence of pivots and hinges on floor also facilitates cleaning.

Neat appearance. Teachers emphasize importance of eliminating cloakroom clutter. WARDROBEdoors preserve businesslike, attractive uniformity in class environment. Sections are highly scuff-resistant and have excellent finishing qualities.

Send for Manual

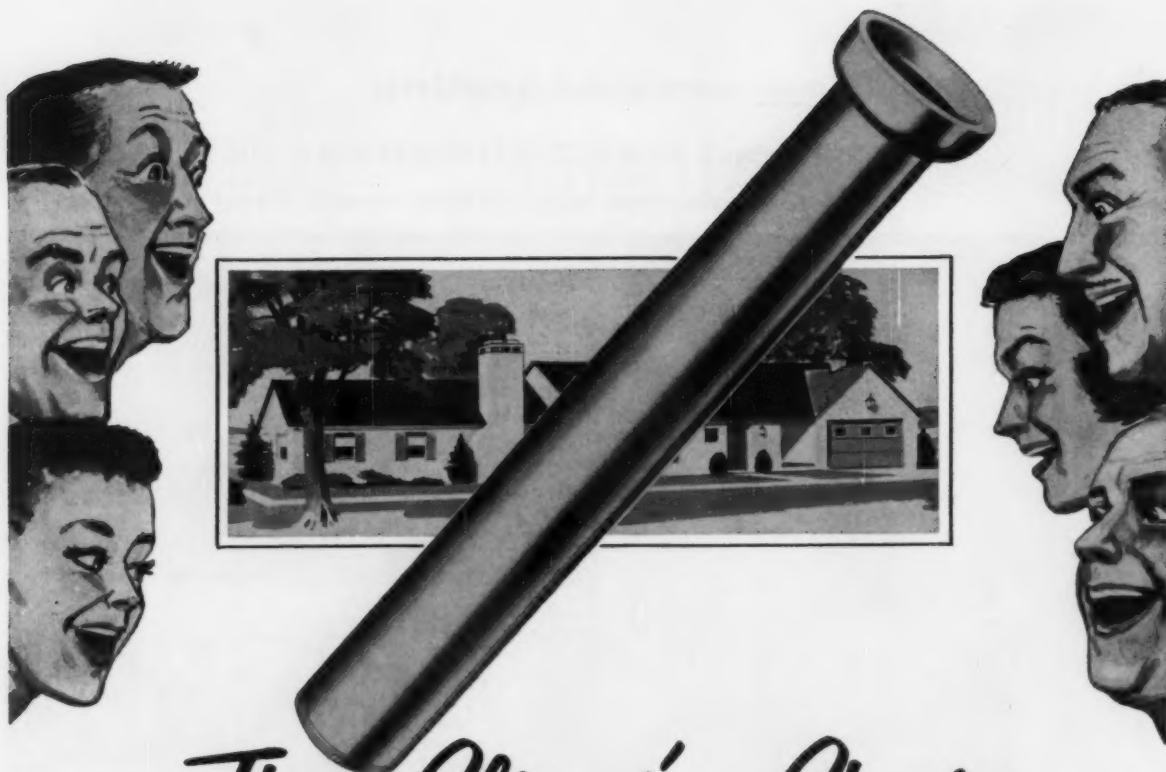
Contains application photos, detailed drawings, sample specifications, building requirements, and letters reporting users' experience. Free.

* 10 ft x 6 ft WARDROBEdoor, f.o.b. Rockford, Illinois. Price subject to change without notice.



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Here's one case where the material that is *proved* best is also accepted and wanted by the client. Survey after survey shows the public knows Clay Pipe is permanent and prefers it to all other pipe. When you specify Vitrified Clay, you can count on immediate agreement, because your client shares your knowledge that Clay Pipe is the *only* pipe that *never wears out*.

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Versatile, economical, long-lasting! No other pipe serves you and your clients so well.

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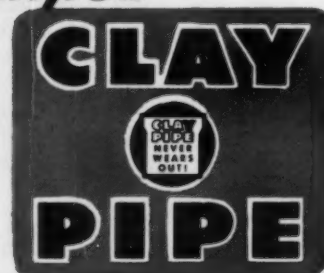
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- One of a series of advertisements being presented in national magazines by Universal Atlas — to promote interest in architectural contributions for a greater America through the medium of concrete. For more about this building method, write to Universal Atlas, 100 Park Avenue, New York 17, N. Y.

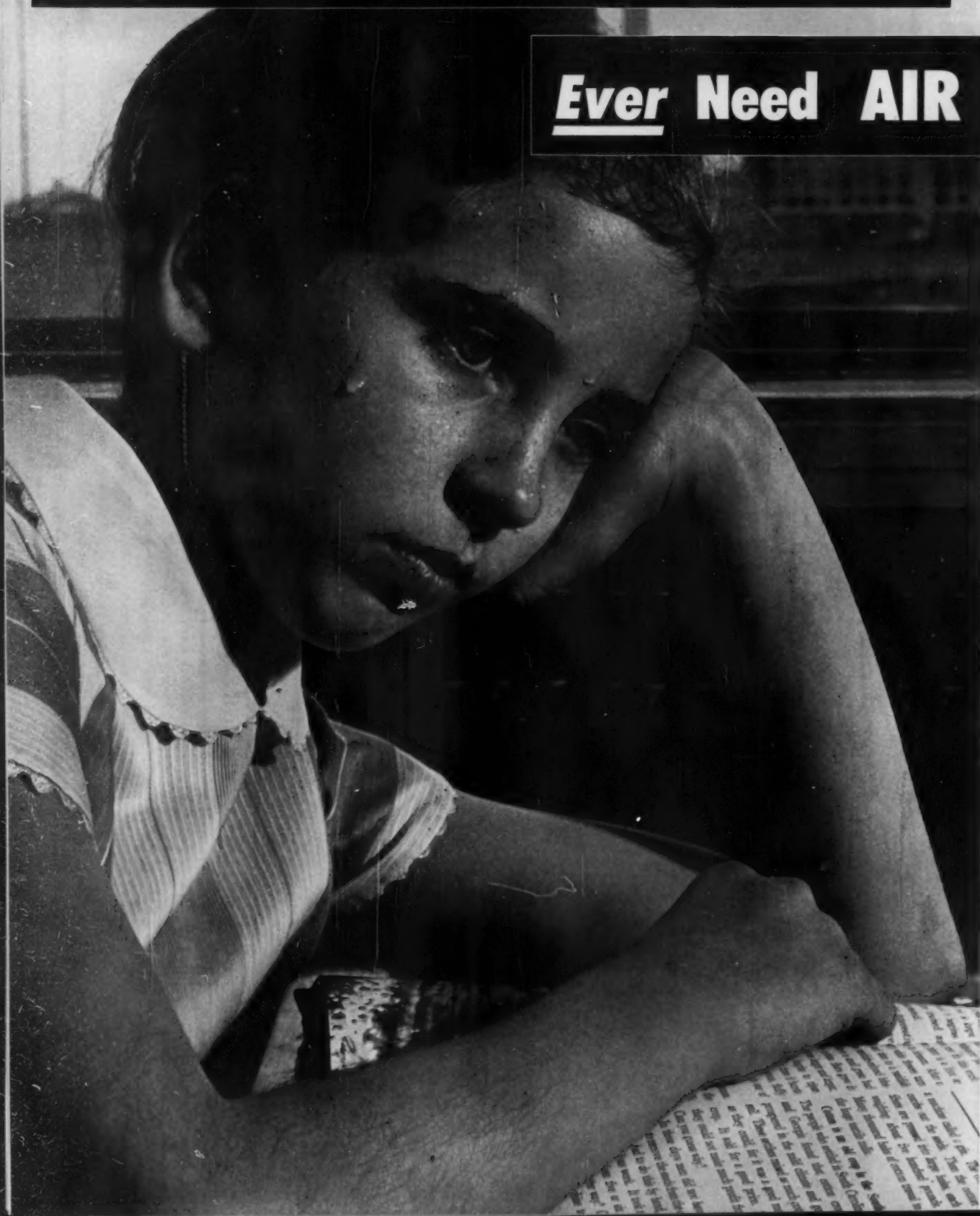
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Will The School You Are Planning

Ever Need AIR



CONDITIONING?

Plan with the new HerNel-Cool II INSTALL IT NOW—AIR CONDITION LATER

Nearly every school would benefit from air conditioning *now*—as have offices, theaters, hospitals and homes. Unfortunately, the money to provide it isn't always in the current school budget. The HerNel-Cool II year 'round unit ventilator solves that problem.

These units can be installed now so that the school enjoys all the usual benefits of the famous Herman Nelson DRAFT|STOP system—heating, ventilating, natural cooling (with outside air), and control of window drafts. Only the addition of a chiller in the boiler room is needed for complete hot weather air conditioning.

It can be provided initially or at any future time. When it is wanted, air conditioning can be secured without disruption . . . and without expensive alteration and installation charges.

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HerNel-Cool II units provide individual temperature control for each room, automatically. Most of the year they provide heat, ventilation, or natural cooling (with outside air) as the room requires. When a chiller is installed in the boiler room, HerNel-Cool II units also function as air conditioners.

In hot weather, the units switch automatically to mechanical cooling, with chilled water circulating in the same piping that carries hot water during cold weather. The cost is far less than separate heating and air conditioning systems—both for installation and operation.

Would you like more information? Just write to Herman Nelson Unit Ventilator Products, American Air Filter Company, Inc., Louisville 8, Kentucky.

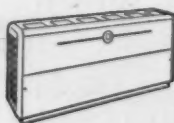


herman nelson
UNIT VENTILATOR PRODUCTS

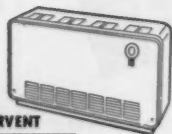
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System of Classroom Cooling, Heating and Ventilating

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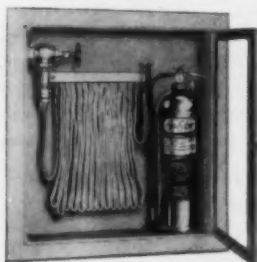
**faster, easier
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*because the beauty is
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Fyr-Fyter two-piece fire hose and extinguisher cabinets

One man can quickly, easily and accurately install these modern, attractive, recessed cabinets featuring two-piece construction—the cabinet box or tub and separate door and trim assembly. After cabinet box or tub is anchored, and inside equipment fitted, the removable door-and-trim assembly can be secured quickly. There's no chance of damage from bumps, scratches or broken glass, because door-and-trim stay factory-fresh in carton until needed!



Fyr-Fyter's two-piece construction allows more room to work... makes plumbing connections more accessible... means less weight and bulk to handle. Angle valve, hose rack, fire hose and extinguisher are properly positioned faster. And final decorative color finishes applied at the factory are now practical.

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A new and distinctly different decorating material combining true brick texture and color, light weight, ease of application and low cost to make it possible for everyone to enjoy the exciting beauty of brick interiors in their home.

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A new kind of wall paneling for home or office that provides luxury as only natural cork can. Dodge Panelcork is versatile; it can be installed over finished walls or directly to studding. Standard 32" x 48" panels are cork-faced over 1/4" hardboard, tongue and grooved and scored in 16" squares to give a pleasing design that's never monotonous. Send for descriptive bulletin.



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3 distinct lines of cork floor tile



VINYL-CORK TILE
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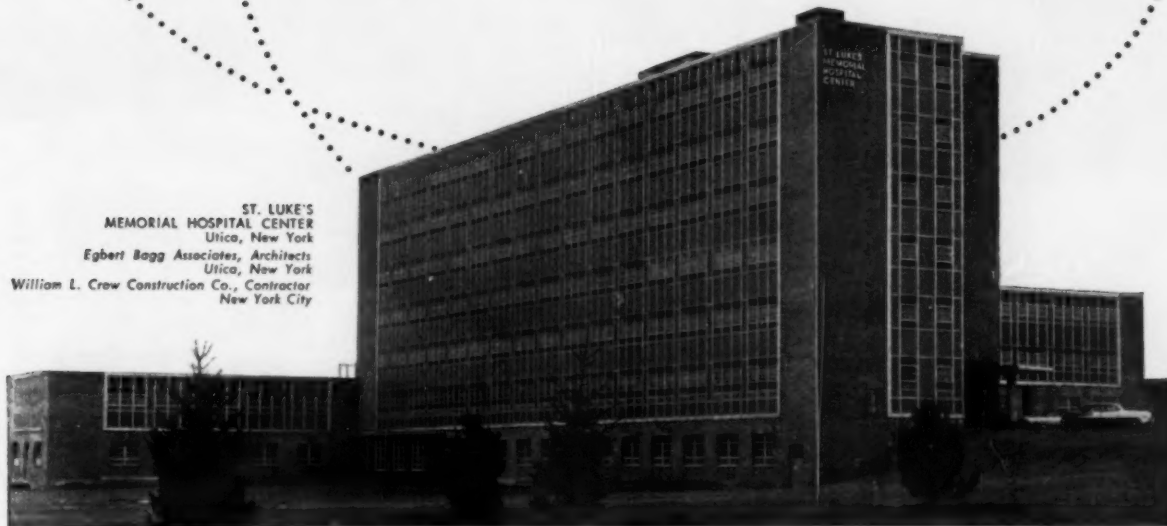
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ADD TO THE EFFICIENCY, APPEARANCE AND
PATIENT COMFORT OF THIS MODERN HOSPITAL

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Utica, New York
Egbert Bagg Associates, Architects
Utica, New York
William L. Crow Construction Co., Contractor
New York City



Cupples' aluminum curtain walls give this six-story structure more light, more space at less cost.

Spandrels are aquamarine porcelain on the outside, aluminum on the inside. Cupples' heavy, double-weatherstripped projected windows accommodate $\frac{1}{2}$ " and $\frac{3}{4}$ " insulated glass and detention screens. Extruded aluminum cove mold between floor line and interior of curtain wall; 8" wide belt course extrusion, vertical and horizontal. Vertical mullions are $\frac{3}{4}$ " deep and 3" wide to accentuate the belt course line.

All exterior aluminum doors—including side lights and ground floor fixed lights—also by Cupples.

If your plans include aluminum—whether for curtain walls, windows, doors, ornamental products, or Alumi-Coustic grid systems—we welcome your inquiries. Cupples' high standards of design and manufacture meet or exceed the most rigid requirements without premium costs. Our catalogs are filed in Sweet's.



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There's no "OR EQUAL" to Day-Brite

Sound extravagant? Not when you compare these fixtures with others on the market. Compare design. See how Day-Brite fixtures flatter smart, modern interiors. Contrast lighting performance. Then, move in close. Count the Day-Brite features that reduce owner maintenance. Hand-test the strength of these fixtures. Compare beauty. Look at the difference in machine work. See how carefully tooled Day-Brite parts fit snugly together. Note the *little touches* that say, "No effort was spared to make this the world's finest lighting instrument."

You won't find Day-Brite lighting fixtures in a poor job and you'll seldom see a good job without them. Isn't Day-Brite the fixture for your next job . . . for *all* your future jobs.

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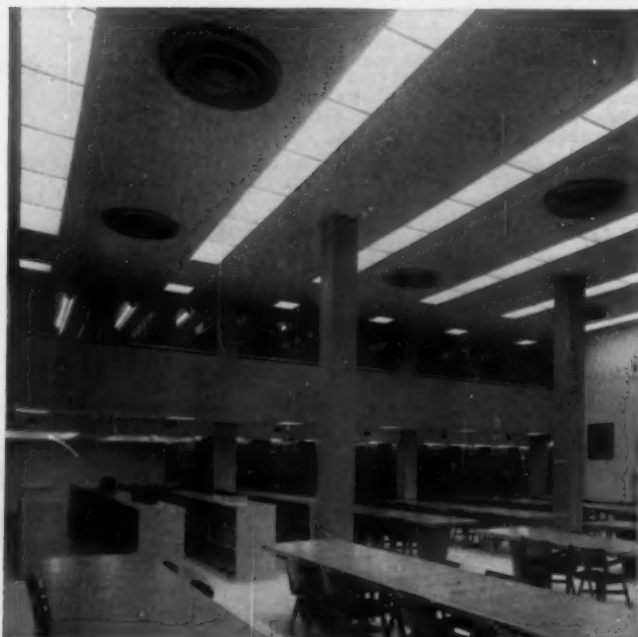
DAY-BRITE LIGHTING MAKES THE BIG DIFFERENCE HERE



University of Miami Law Building lighted with glare-free Day-Brite fixtures. Architect: Robert M. Little; Engineers: Norman J. Dignum & Assoc.; Electrical Contractor: B & W Electric Co., Miami.



Lecture room, lighted with Day-Brite Luvex® fixtures, encourages concentration.



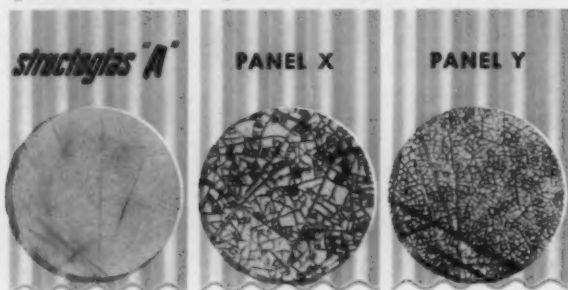
Day-Brite recessed Mobilex® fixtures flood this library with soft, full illumination.

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outlasts other "quality" plastic panels in 2-year exposure test!



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OVER 300% GREATER EROSION RESISTANCE

Here's why independent laboratory tests prove STRUCTOGLAS "A" plastic panels outlast all others . . . assure lasting beauty in both outdoor and indoor applications:

STRUCTOGLAS "A" is made from a new extra-tough resin*, molded by an exclusive process and finished with a "Pebble Grain" surface for added erosion resistance. Competitive panels "X" and "Y", made from good, light-stabilized conventional resins, quickly lost their surface gloss and color . . . "alligatored" so badly the glass fibers were exposed . . . light transmission was sharply reduced.

Specify the panel that retains its "like new" look for years. Insist on STRUCTOGLAS "A" . . . it costs no more than other "look alike" plastic panels.

*Paraplex-444, a product of Rohm & Haas Company

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Blue Cross-Blue Shield Building
Little Rock, Arkansas

Marmet Custom Engineered windows can be developed for any type of structure . . . however unusual . . . or conventional its design may be. They are as completely versatile as the architects skill and imagination demands. With Marmet Series 1200 Custom Windows . . . there are "no strings attached" to architectural creativeness.

The Series 1200 Custom Window is fabricated of the finest extruded aluminum alloy, 3/16" thick in both the frame and sash sections. Tubular (as well as the standard) sash is available for construction jobs requiring greatly increased rigidity. Snap-on glazing bead for inside or outside glazing accommodates up to one inch insulated glass. Special double vinyl weatherstripping, anchored in a dovetail shaped groove provided in the frame extrusions, is available in the custom series as well as other Marmet doors and windows. Like all Marmet aluminum structural products, the Series 1200 Custom Windows have a beautiful satinized or alumillite finish etched in the world's largest dip tanks.

To lend graceful window beauty to educational, religious, or commercial structures like the Blue Cross building above . . . specify MARMET Series 1200 Custom Windows. Marmet precision aluminum fabricating is also available in two series of ribbon windows (note industrial application below), two architectural projected series, standard and custom entrances, glass block ventilators and aluminum doors.



For detailed information and specifications on the complete line of MARMET windows—consult Sweet's Catalog File No. 17a. . . or write to MARMET for Catalog 57-A.

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BRIXMENT

Better Mortar for Blocks



BETTER PLASTICITY

To build the best possible concrete-block walls, the bricklayer must use plastic mortar. The mortar must be plastic enough to stick to the long head joint. It must not drop off the edges of the block when the block is swung up, and lowered into place. It must remain plastic long enough to enable the bricklayer to tap the block down to the line, easily and accurately.

Brixment mortar provides this necessary plasticity. Moreover, it stays soft and plastic long enough to let the bricklayer level, plumb and straighten the unit and adjust it to its final position in the wall before the mortar stiffens.

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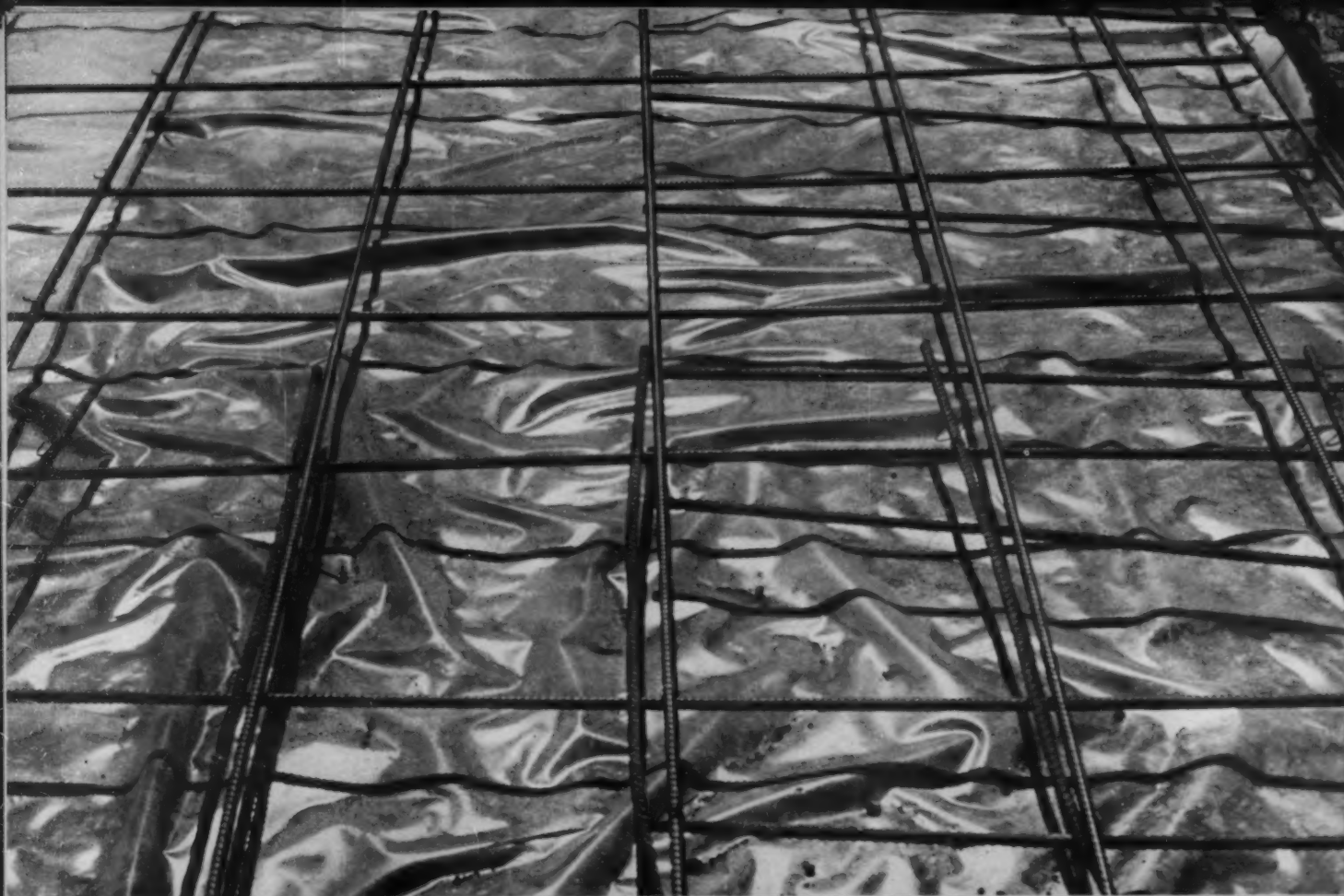
100 Years of Progress



Best wishes to the members of The American Institute of Architects, Inc. on the occasion of the AIA CENTENNIAL CELEBRATION CONVENTION, Washington, D.C., May 14-17, 1957.



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VISQUEEN film protects San Jose College from moisture for life

In school construction, too, architects and contractors turn to VISQUEEN film as the best permanent type moisture barrier they can buy.

At San Jose State College in California, for example, VISQUEEN film was specified by the California Division of Architecture, Department of Public Works, for use under the concrete slab floors that are a feature of the design. Light, easy to handle, inexpensive to buy and to place, VISQUEEN film will protect the new buildings for life against water damage, insure dry, warm floors that are important for student health.

The contractors, Anderson and E. A. Hathaway & Co. are using VISQUEEN film as a moisture barrier under slabs and in stud walls for residential as well as school construction.

They find the material useful as an equipment cover, to protect materials, to temporarily close openings against the weather.

VISQUEEN film is literally the film of a thousand uses.

Write us, or mail the information request tag for details.



VISQUEEN film is all polyethylene, but not all polyethylene film is VISQUEEN. Only VISQUEEN film has the benefit of research and resources of VISKING COMPANY.

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Graceful horizontal lines

of beautiful California redwood siding enhance the structural form of this school building. The imaginative use of standard CRA bevel siding patterns can lend new character to contemporary architecture. Whatever the effect desired, specify "CRA—Certified Dry" redwood to assure long years of service at minimum maintenance cost, in any type of climate.



Everglades School, Florida
Weed, Russell, Johnson
& Associates, Architects

Photo: Rudi Rada

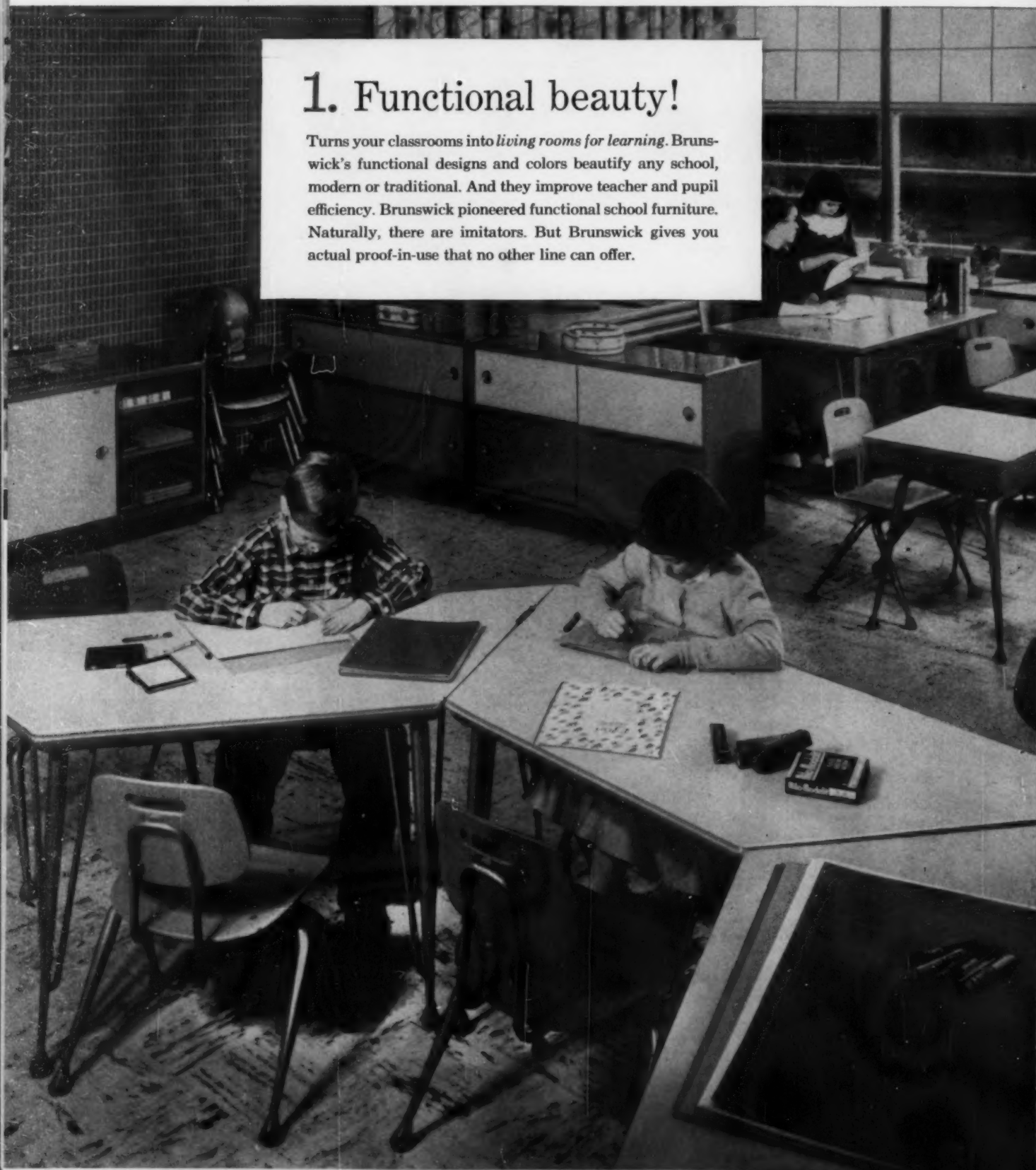
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4 reasons why more and school authorities are

1. Functional beauty!

Turns your classrooms into *living rooms for learning*. Brunswick's functional designs and colors beautify any school, modern or traditional. And they improve teacher and pupil efficiency. Brunswick pioneered functional school furniture. Naturally, there are imitators. But Brunswick gives you actual proof-in-use that no other line can offer.



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Extends throughout the life of your Brunswick equipment! Your representative helps you plan every installation in exact detail . . . from school furniture to folding gym equipment. His service *begins*, not ends, with the sale. He is always on call when needed. And he is backed by Brunswick dependability that has been famous for 112 years.



Brunswick also offers a full line of space-saving equipment such as folding gym seating, backboards and partitions.



3. Rugged construction!

Means many more years of trouble-free use! The sand bag test above is one of many that Brunswick Furniture must withstand. They demonstrate Brunswick's many construction, engineering and quality features. Ask your representative to explain them all. And talk to friends using Brunswick. They'll tell you Brunswick is your best investment!

Sales figures show that more school authorities are changing to Brunswick than to any other line. Four excellent reasons are shown on these pages. And there are others. One is Brunswick's fast, dependable delivery. Another is the way Brunswick stands 100% behind every piece of equipment sold. A third is that Brunswick offers the *widest* line. You can get all your needs from one dependable source. They all add up to *quality* . . . your best investment in the long run.

See your representative, or write to The Brunswick-Balke-Collender Co., 623 So. Wabash Ave., Chicago 5, Ill.

*Still time to order for delivery
before school starts this fall!*

Brunswick

the investment line

ON THE NEWS FRONT WITH STRUCTURAL STEEL



Architect: Appleton and Wolfard; steel fabricator: Golden Gate Iron Works, Inc.; consulting engineer: Ira S. Kessey; all of San Francisco.

Architect: John C. Hoops, San Francisco; steel fabricator: Schrader Iron Works; civil engineer: John Brown, San Francisco.

Exposed Steelwork in Building

Two recent examples of how steelwork in buildings is left exposed for its beauty are shown here. At the top is the Eureka Valley Recreation Center gymnasium in San Francisco. Here structural steel spans the 70 by 107 ft room in a bold grid pattern made up of interlacing diagonal Bethlehem 18 in. wide-flange beams.

Below is a house in Sausalito, Calif., which has an exposed structural steel framework. Noteworthy in the construction of this house is the use of a steep-sloping site. Bethlehem structural shapes were used as supporting columns as well as for the framework.



BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. Export Distributor: Bethlehem Steel Export Corporation

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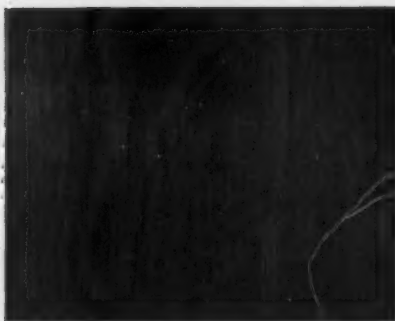
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SPECIFICATIONS...

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*Executive Office, United States Nat'l Bank of Denver, Colo.
Interior Designer: Maria Bergson Associates, N.Y.
Architect: James S. Sudler, Denver.
Contractor: N. G. Petry Construction Co., Denver*



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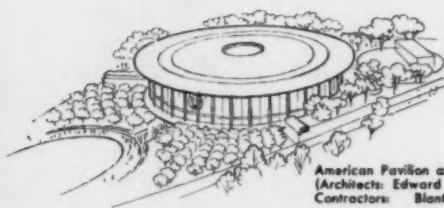
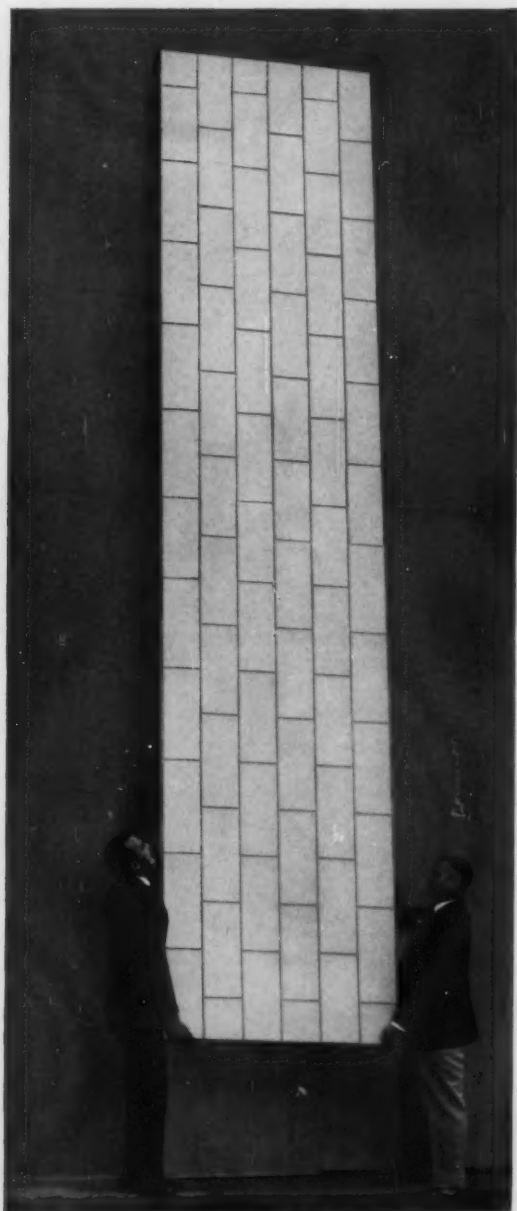
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A new, basic building material...
chosen for the U. S. Pavilion...

KALWALL®

TRANSLUCENT CURTAIN WALL PANELS*



American Pavilion at Brussels World's Fair
(Architects: Edward D. Stone, New York;
Contractors: Blanton-Aubert, Brussels.)

The American Pavilion at the Brussels World's Fair will have a gigantic free-span roof of translucent curtain wall construction — a design made possible by the lightness, strength, and versatility of a new building material — KalWall.

What KalWall is

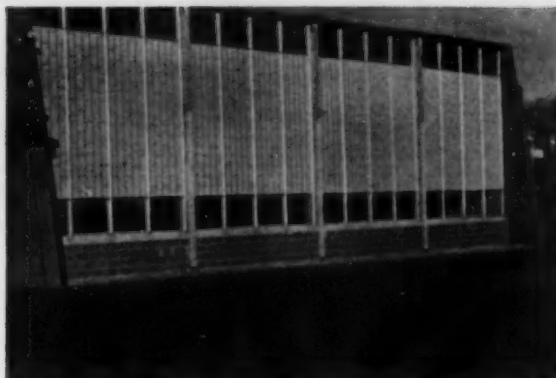
KalWall Translucent Panels are a rigid sandwich structure consisting of a fibreglass face, and an aluminum grid as the basic core. It has a high structural strength, yet weighs slightly more than 1.5 pounds per square foot — so light that the whole World's Fair delivery will be made by airlift rather than conventional freight.

What KalWall does

KalWall now provides the architect with an exciting new curtain wall construction, ideally suited for use wherever lighting — either to or from the interior — is to pass through exterior walls. Artistic as well as practical effects can be achieved through any combinations of pleasant, translucent tints: soft green, blue, rose, and yellow, as well as white and crystal.

Construction with KalWall Panels assures the highest weather-proof wind-and-wear resistance.

◀ **KalWall Panels** are easy to install. Made in standard sections, 4' x 20', 4' x 12', 4' x 10' and 4' x 8'; 1-9/16" or 2-3/4" thick. KalWall units are designed for easy field assembly, with joint systems to meet all requirements.



School — Exterior view of Daniel P. Hurd School, Woburn, Mass., showing use of translucent KalWall for better interior lighting. (Architect: Perley Gilbert, Lowell; Installer: Raymond H. Pierce Co., Boston.)



Gymnasium — Ninety percent of one wall of the unusual St. Michaels of the Archangels School, Glens Falls, N. Y., is made of translucent KalWall Panels. (Architects: Harrison & Mero, Troy; Contractors: Waggaman & Collyer, Glens Falls.)

KalWall has been rigidly tested to meet all requirements for commercial and institutional applications. Insulating properties are high, coefficient of expansion such that it can be specified for any climate, used with any framing material.

What KalWall Can Do for YOU

KalWall makes it possible for you to achieve dramatically beautiful and lasting effects, with prefabricated panels low in cost, quick and easy to install, very low in maintenance.

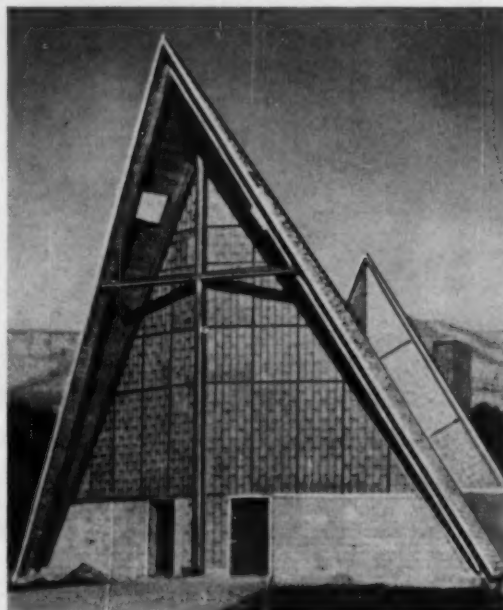
Especially adaptable if you design schools, public buildings, or churches. But equally apt for commercial structures where large areas of translucency are desirable. You will probably agree that the possibilities of unusual design with KalWall are almost limitless.

Send for free literature — including full description, test data, specifications, and construction details of KalWall Translucent Panels.

*Patented and Patents Pending

KALWALL®

TRANSLUCENT PANELS*



Church — Exterior of church wall structure, St. Gregory's Church, Woodstock, N. Y., utilizing KalWall Panels with color inserts for stained glass effect. (Architect: Wm. H. Van Benschoten; Contractors: Karl Schroeder, Woodstock.)

KALWALL CORPORATION

41 Union Street
Manchester, N. H.

Please send me free of charge, complete information and specifications on KalWall Translucent Panels.

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ROOFING CONTRACTOR:

Warren-Ehret Co.
Baltimore, Maryland

On the new Mondawmin Shopping Center . . .

RUBEROID BUILT-UP ROOFING

Will assure years of trouble-free service

Whatever your roofing need, there's a Ruberoid specification to fit the job. On the new Mondawmin Shopping Center in Baltimore, for example, two different roofing specifications were used. Tested and proven on many buildings over the years, Ruberoid specifications are engineered to fit the job requirements precisely.

1. The main roof area of 1,316 squares was built up of Ruberoid Special Bitumen and Air-Vent Asphalt Felt, Specification 203A. Special Bitumen's formula means superior roof performance under any weather conditions.

2. For the 902 squares of parking deck area, a Ruberoid specification of coal tar pitch and tarred felt was used under the concrete surfacing.

With all Ruberoid Built-Up Roofs, rigid manufacturing standards assure uniform quality on every square and more years of trouble-free service for your roofing dollar.

Consider the advantages of Ruberoid products for your next built-up roofing job. No matter what problem may be involved, there's a Ruberoid specification engineered to fit the job—ask your Ruberoid Approved Roofer.

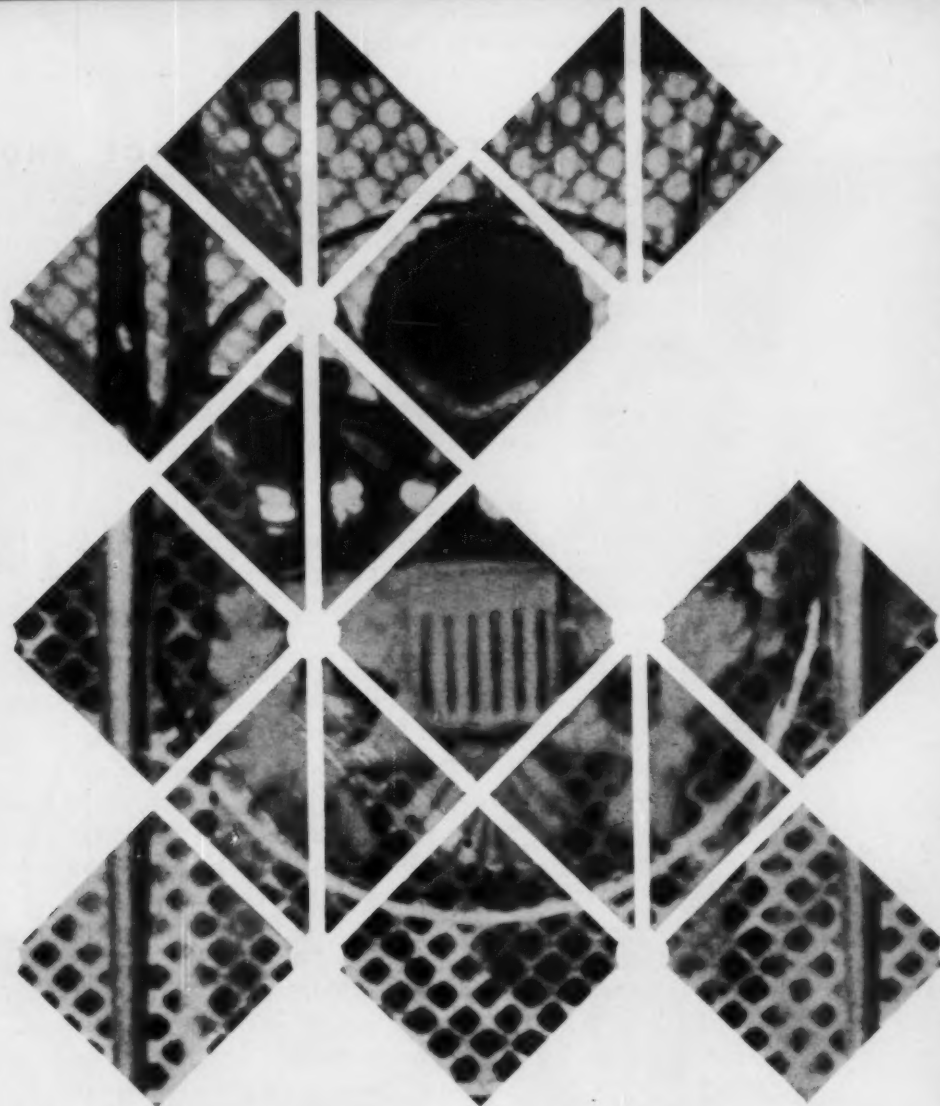


The RUBEROID Co.

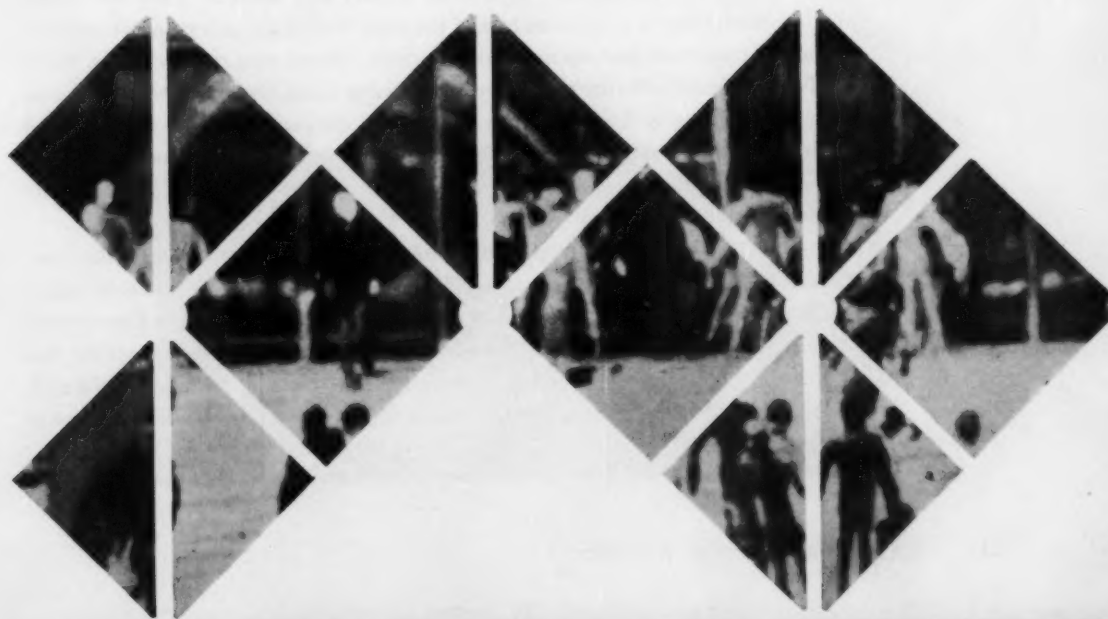
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JULY 1957 ARCHITECTURAL RECORD



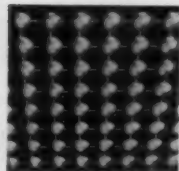
EDWARD D. STONE



AN ARCHITECTURE OF SPACE AND GRACE

ACROSS THE NATION and around the world, the recent years have seen a significant multiplication of buildings by architect Edward D. Stone. And they are buildings of great beauty. There are hospitals, hotels, colleges, houses, museums, and buildings for the government. This is the measure of the rare individual who can win the respect of such diverse people as hospital boards and housewives. Architects have responded as well as laymen; a large part of his work has come to him through referral by other architects. Stone, a native of Arkansas, has been steadfast to his image of architecture as a fine art. Architecture to him is individual creative expression, and he has resisted being catalogued as a disciple of any contemporary school. The evolution of Stone's work has been a highly interesting process. His identity was firmly established in the 1930's by such buildings as the Museum of Modern Art and the Goodyear house. Even in his earliest work, however, he was not completely satisfied with the geometric, pared-down, objective ideals of the day. To these, he added a more subjective and extended concern for buildings inside and out, in the large massing and in the small details. Texture and color tempered the bold outline. Rationalization and order were important, but space was the ultimate concern — triggered in appreciation by its visual qualities. Gradually, these qualities have been reaching maturity in his long roster of works, which will be presented subsequently.

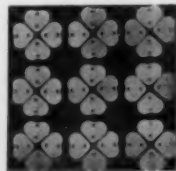
For the past twenty years, he has been experimenting with the principle of patterned sunlight in walls and striated, filtered light in ceilings and roofs. These experiments had their culmination in the New Delhi Embassy presented some three years ago. His innovation of the veiled exterior wall continues to be a salient characteristic of his work. One of Mr. Stone's greatest satisfactions is reporting a comment of Frank Lloyd Wright's that the Embassy was one of the beautiful buildings of our time.



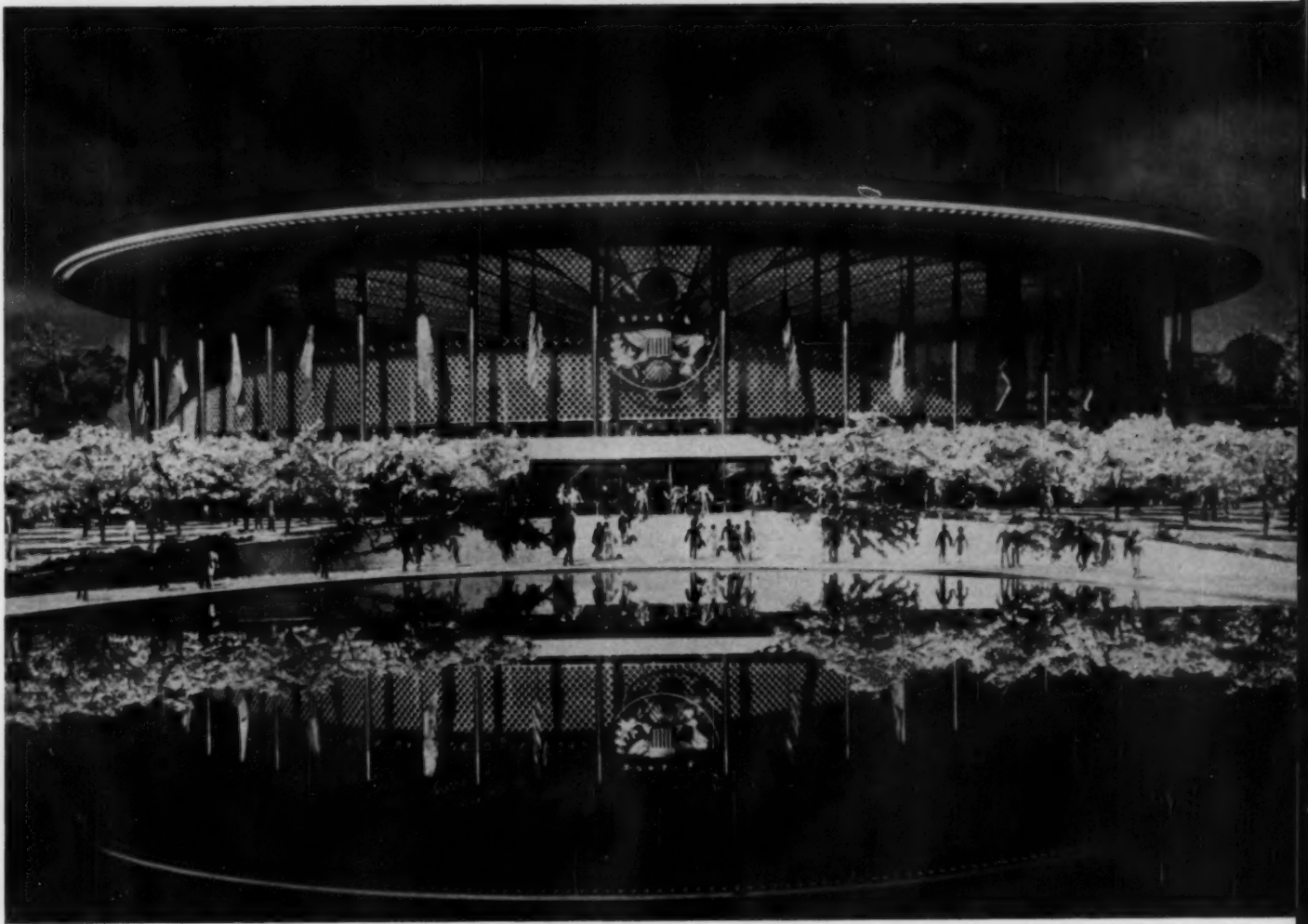
Ceiling, Brussels Pavilion

The buildings on the following pages are among his latest projects, and constitute Stone's first major publication in some time. They are varied in concept, but unified by their screened surfaces. Behind the lace of these screens is an architecture of grace and space. The exteriors have great dignity and warmth. They are formal and balanced; there is a nebulous hint of the past. Within are private sanctuaries — a world of patterned shadows and water gardens, vibrant with rich materials. Stone has been intrigued with the principle of the interior court, the cloistered garden and atrium. And his work for some years has rejected the corridor in favor of a central dramatic space. These new buildings seem to be a happy meeting ground of a number of polarities: the conservative and the experimental; the classic and the romantic; the austere and the highly decorated.

Stone's standing in the architectural profession was emphasized with the commission to design the American Pavilion for the 1958 World's Fair in Brussels (right) — the showcase for America at the first major fair since the 1930's. The Department of State asked the American Institute of Architects to select an architect for this important work. A delegated A.I.A. committee selected Stone. He has worked with Commissioner General Howard S. Cullman and his deputies in the development of this great project.

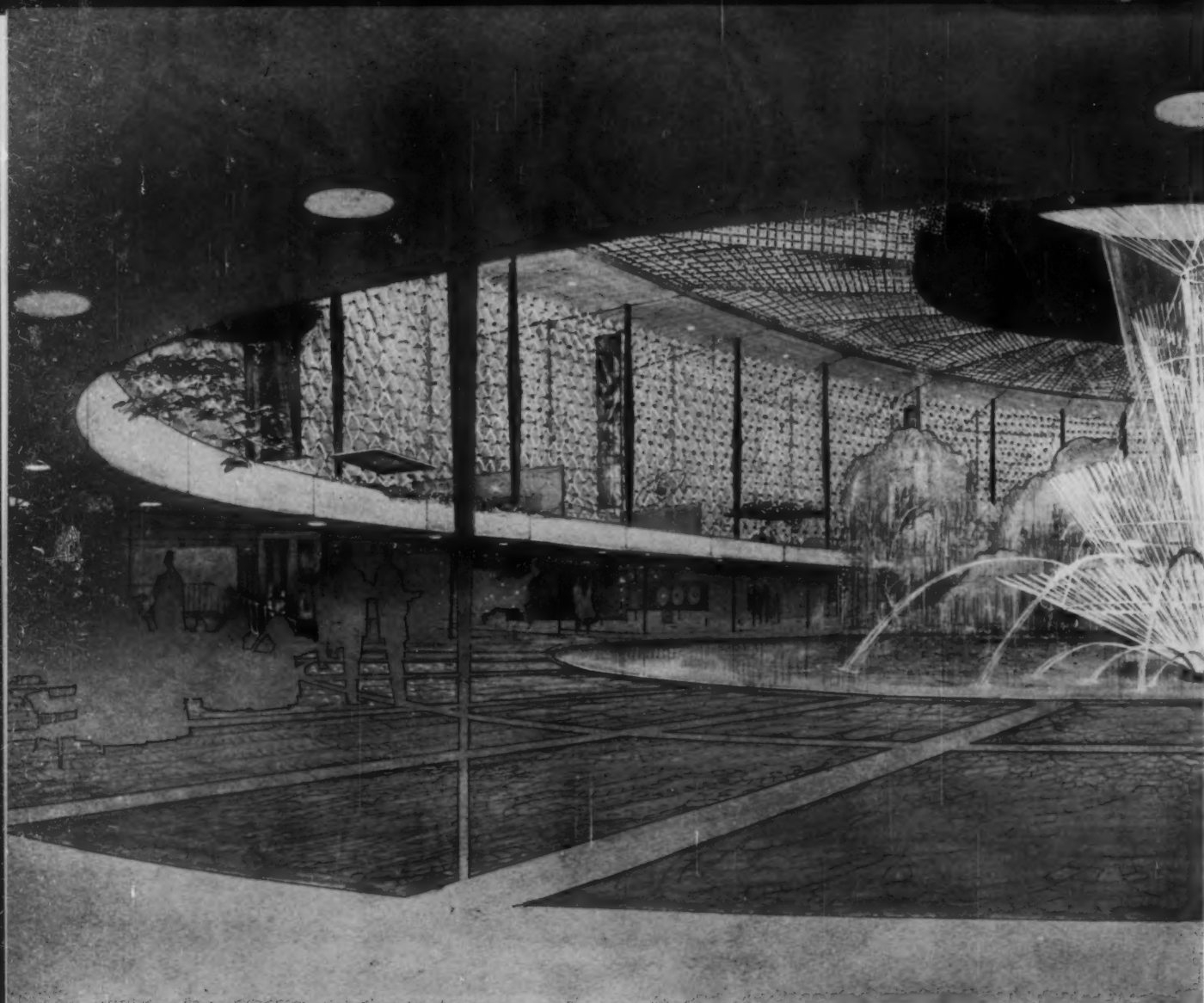


Ceiling, U. of Arkansas, 1948



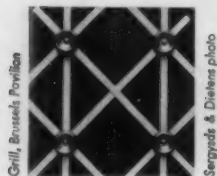
Louis Checkman (also pages 153, 154)





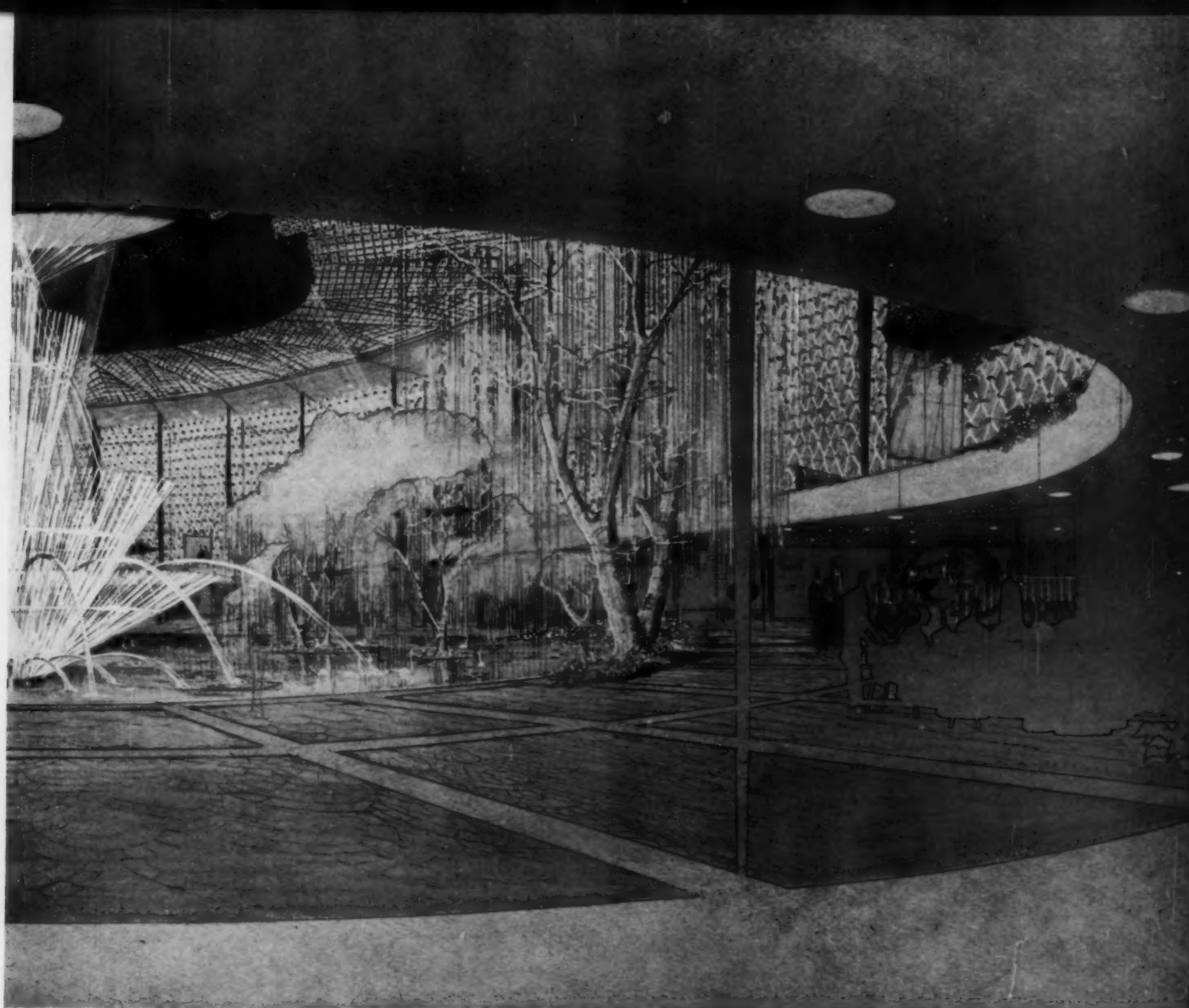
THE AMERICAN PAVILION, BRUSSELS WORLD'S FAIR

Here, an enormous free-span roof is formed in the manner of a bicycle wheel: an outer ring of concrete is connected to an inner ring of steel by cables. Translucent plastic aluminum-core panels cover all but the center. Beneath these hangs gold anodized aluminum mesh. The 340-foot exhibition area is arranged around a water garden and gigantic willows which exist on the site. The exterior is a diagonal mesh of metal bars and transparent plastic. Its antecedent is the Coliseum in Rome, roofed with ropes and canvas. The central feature of the pavilion is undecided; this interior perspective shows one suggestion, a sculpture by Richard Lippold. Also included is a theater to seat 1100, where the U. S. will present every facet of the performing arts.

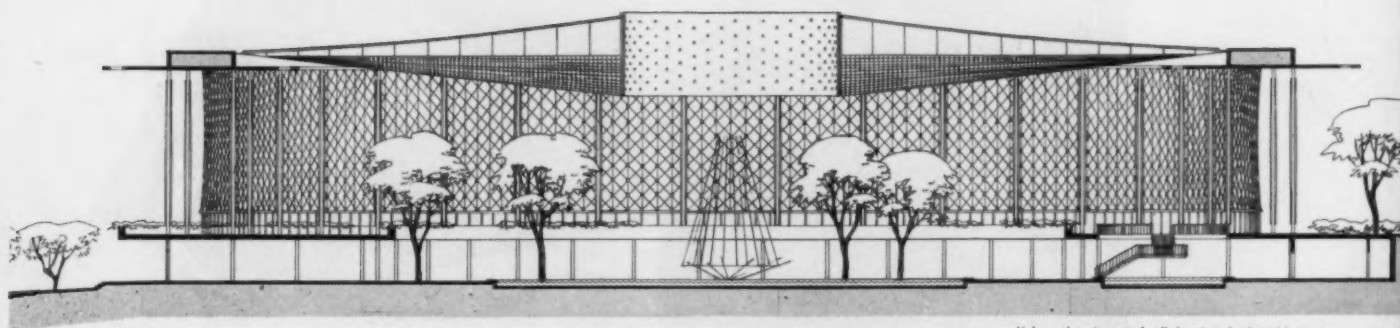


Griff, Brussels Pavilion

Sergiyev & Diekema photo

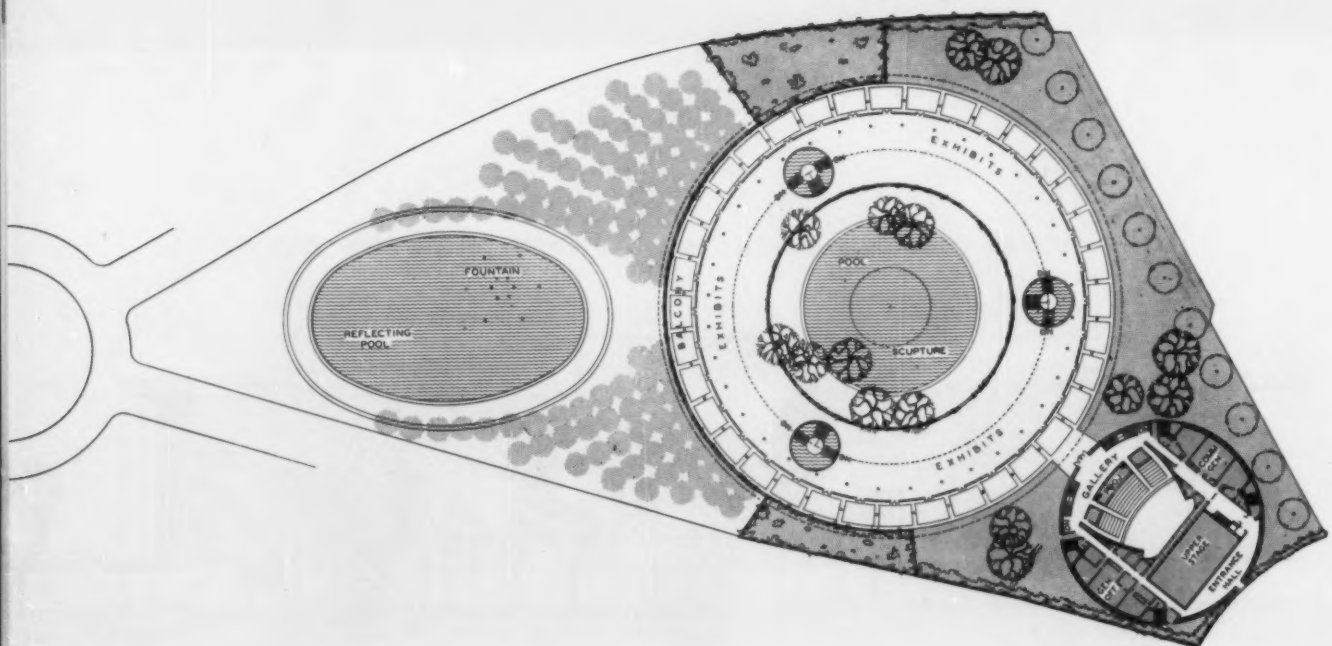
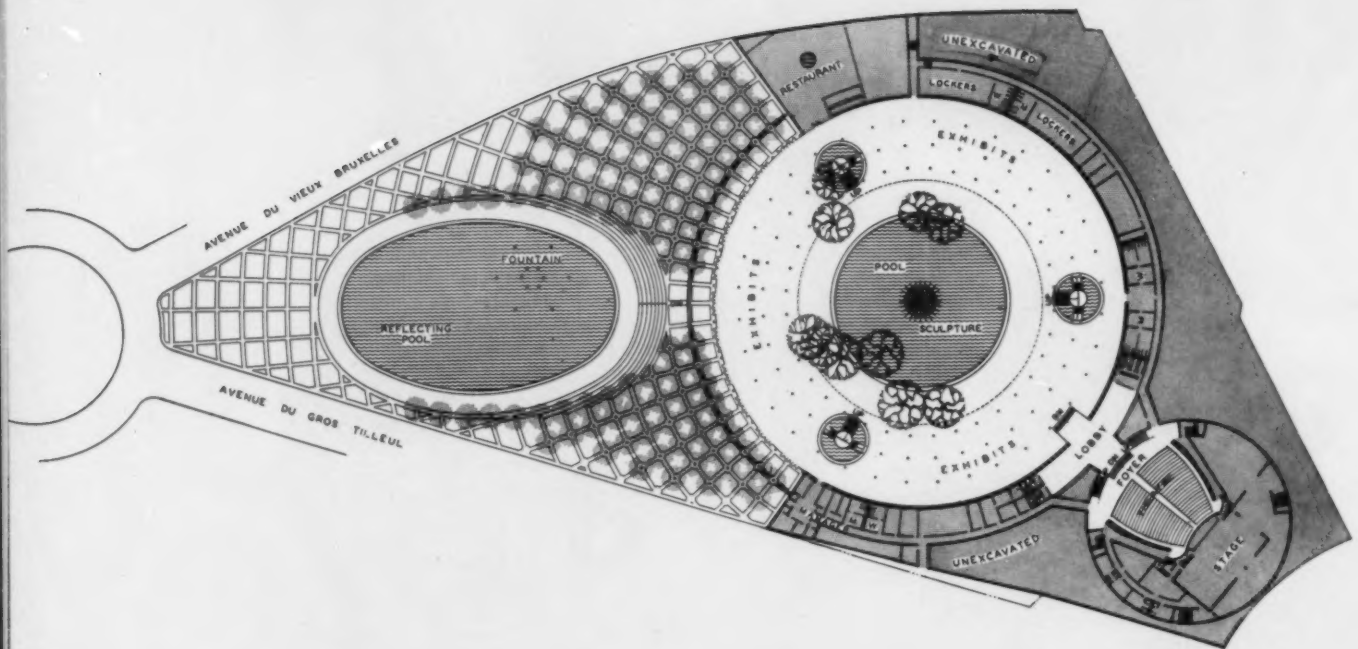


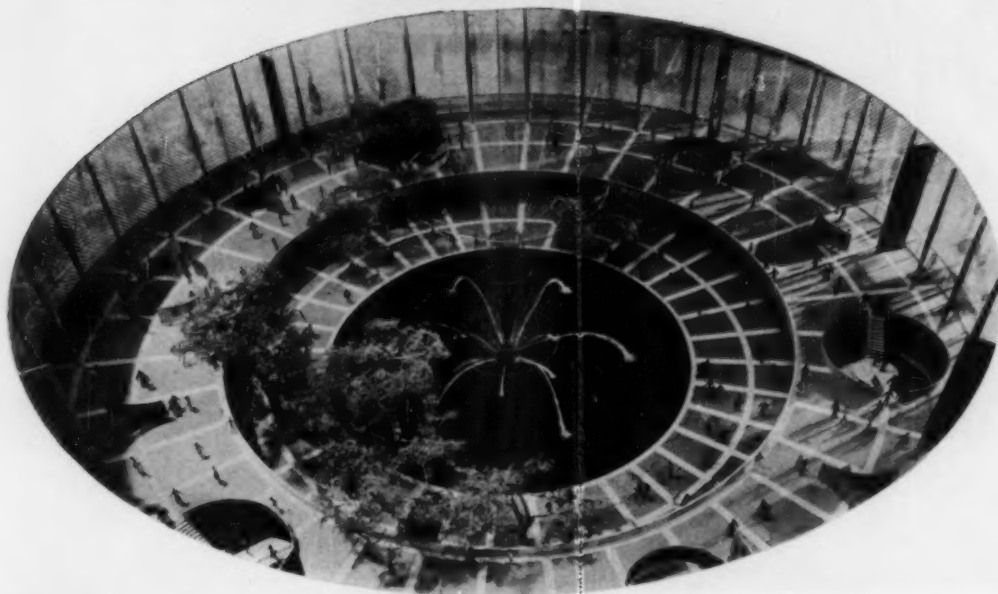
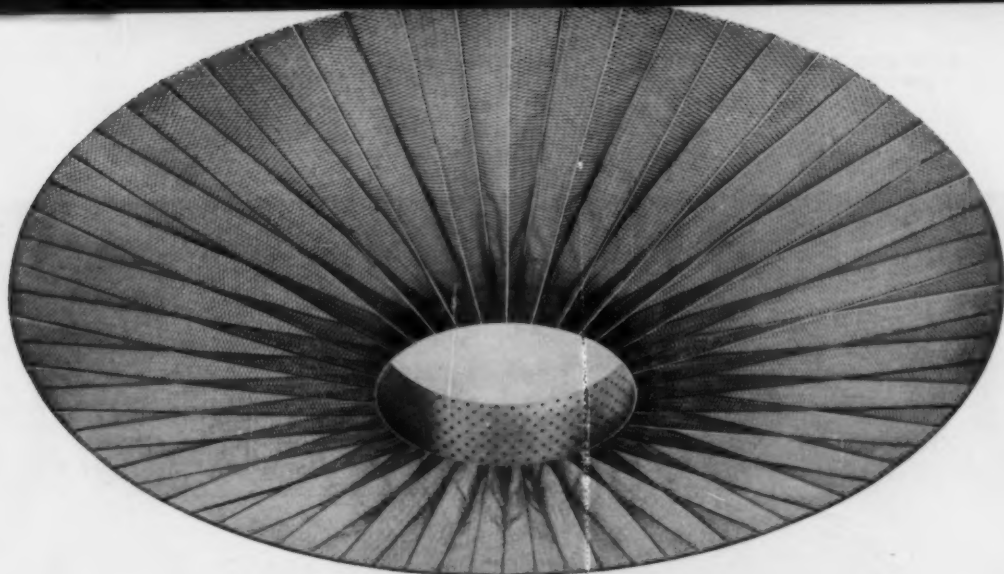
Rendering by W. Kenneth Frizzell



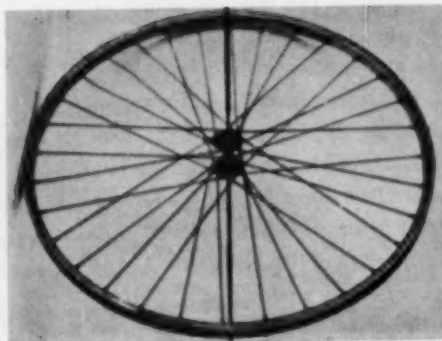
Unless otherwise noted, all drawings by David Leavitt

EDWARD D. STONE: BRUSSELS PAVILION





Louis Chedimont





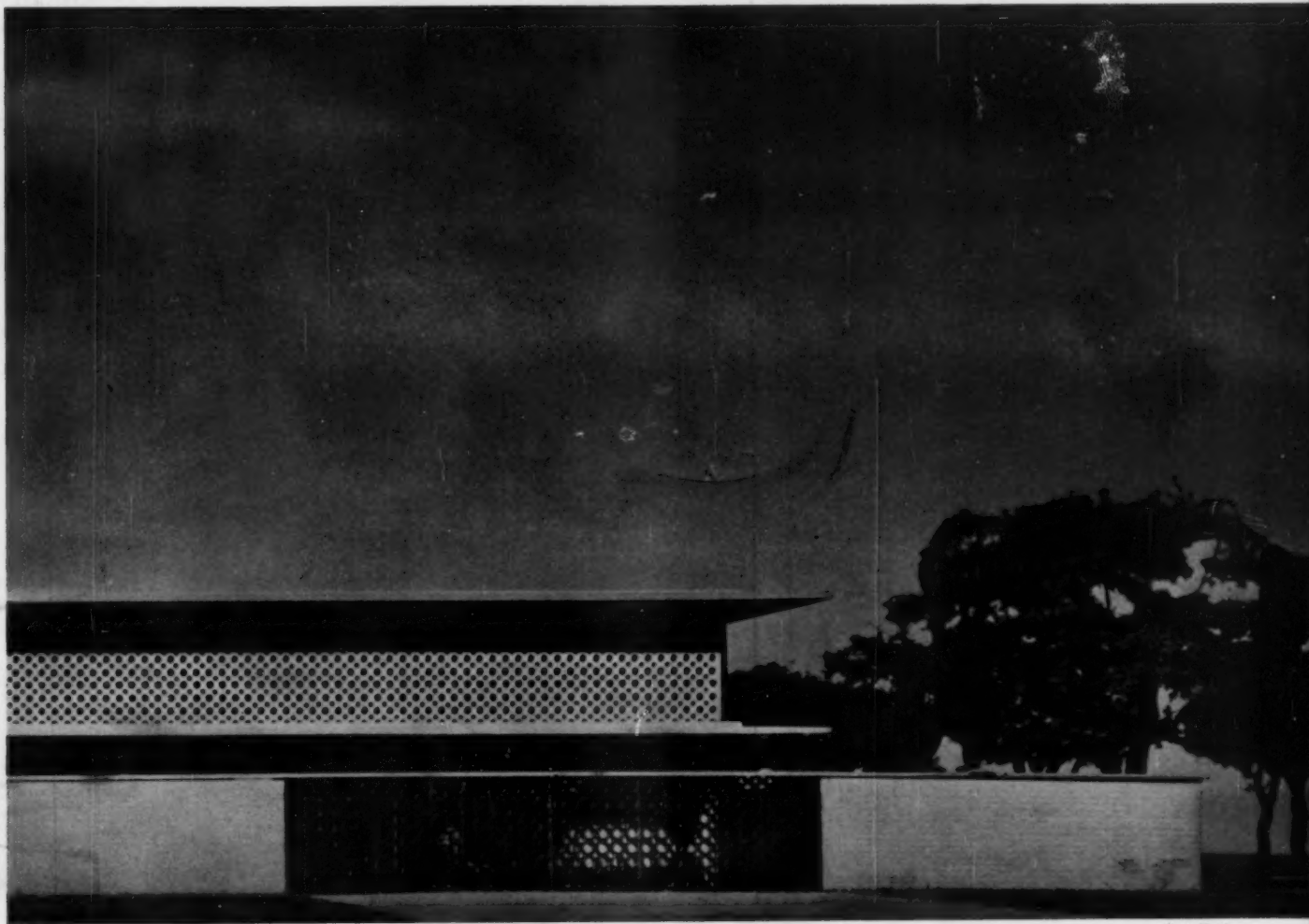
A RESIDENCE IN DALLAS, TEXAS

This luxurious house is conceived much in the manner of the classical houses of Pompeii, where a wall closes the house off from its surroundings. All the family life is within atrium-like rooms, with the dining room an island in a decorative pool. The entire first floor is paved in white marble. The living room is between the swimming pool and the dining area pool. Other rooms on the first floor open into clois-

tered gardens, enhancing the atmosphere of privacy. The second floor has a large master bedroom, flanked by terrace gardens. This entire upper level is screened by a terrazzo grill for privacy and shading from the glare of the Texas sun. At the front of the house is a large, walled-in motor court; gardens continue from the terrace at the rear.



Wall, Grant House, 1946



Louis Checkman



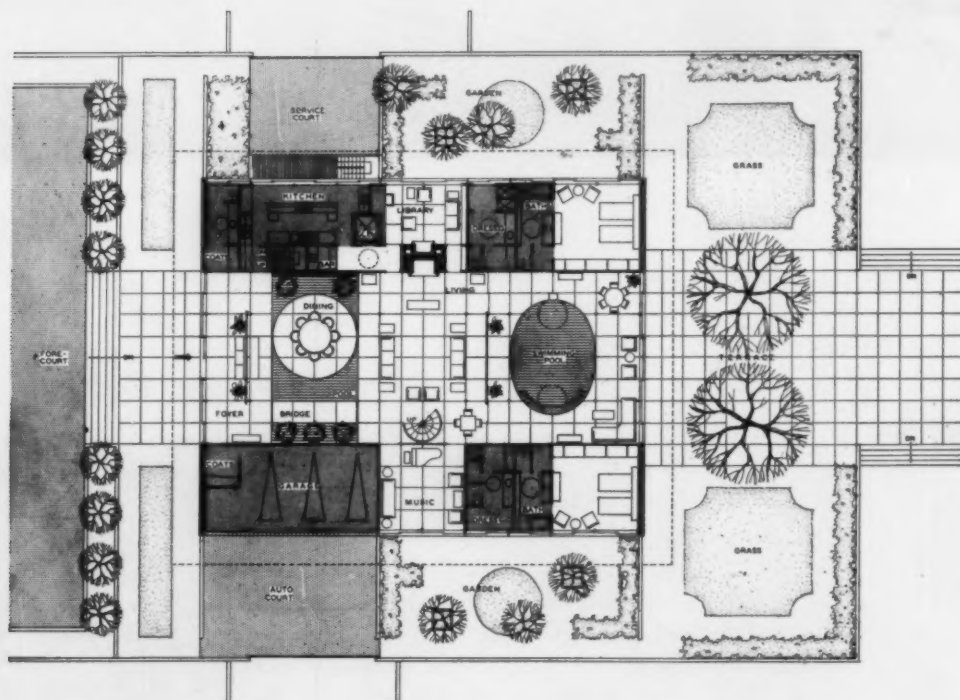
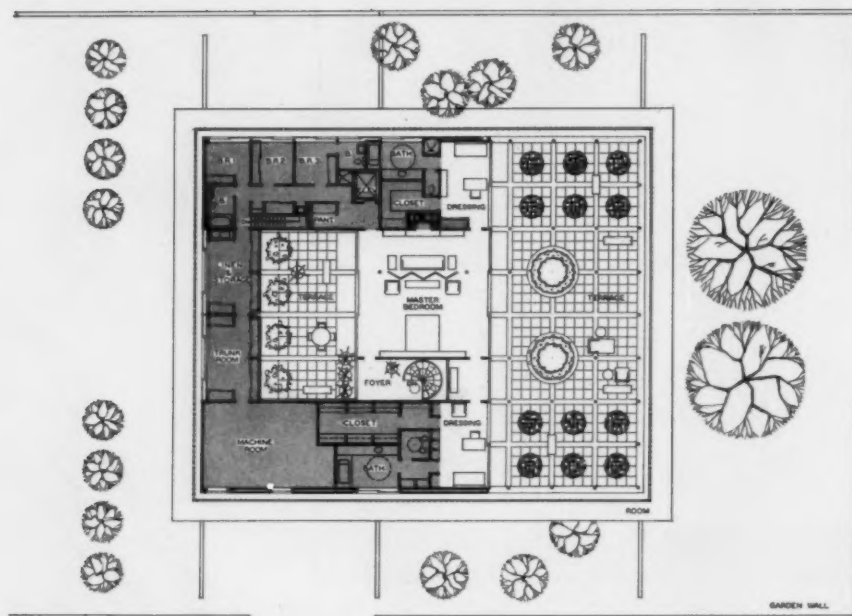
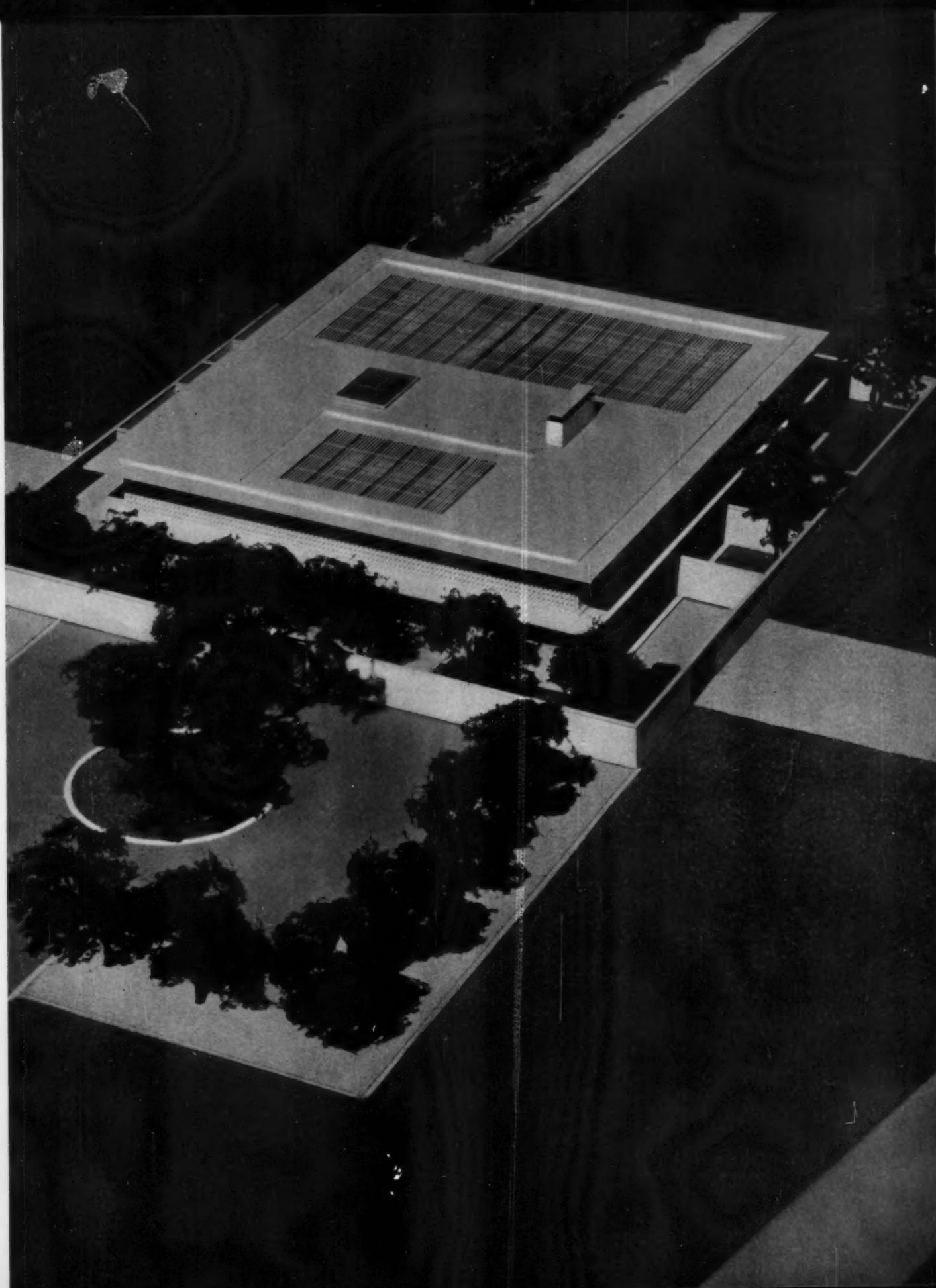
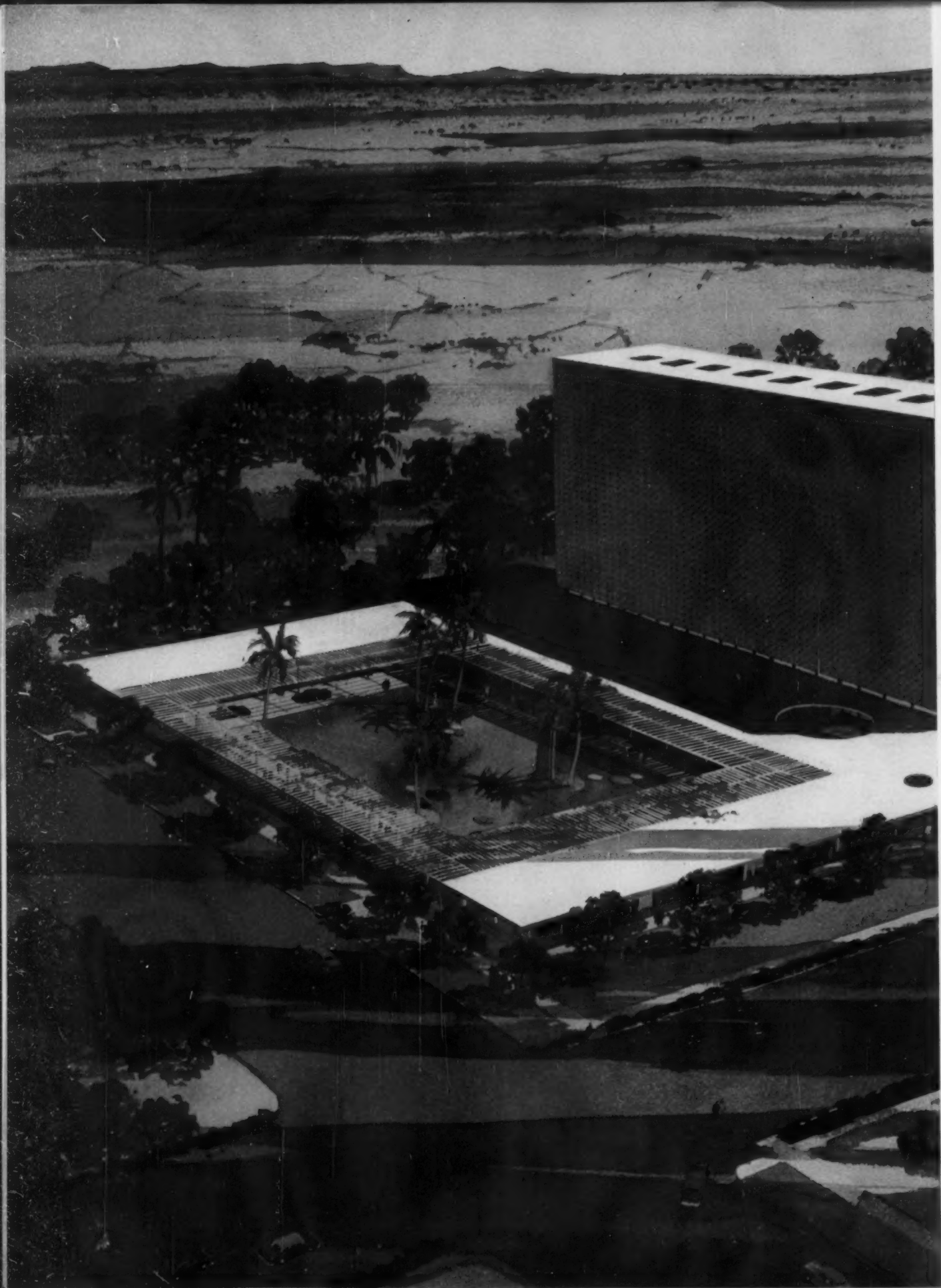
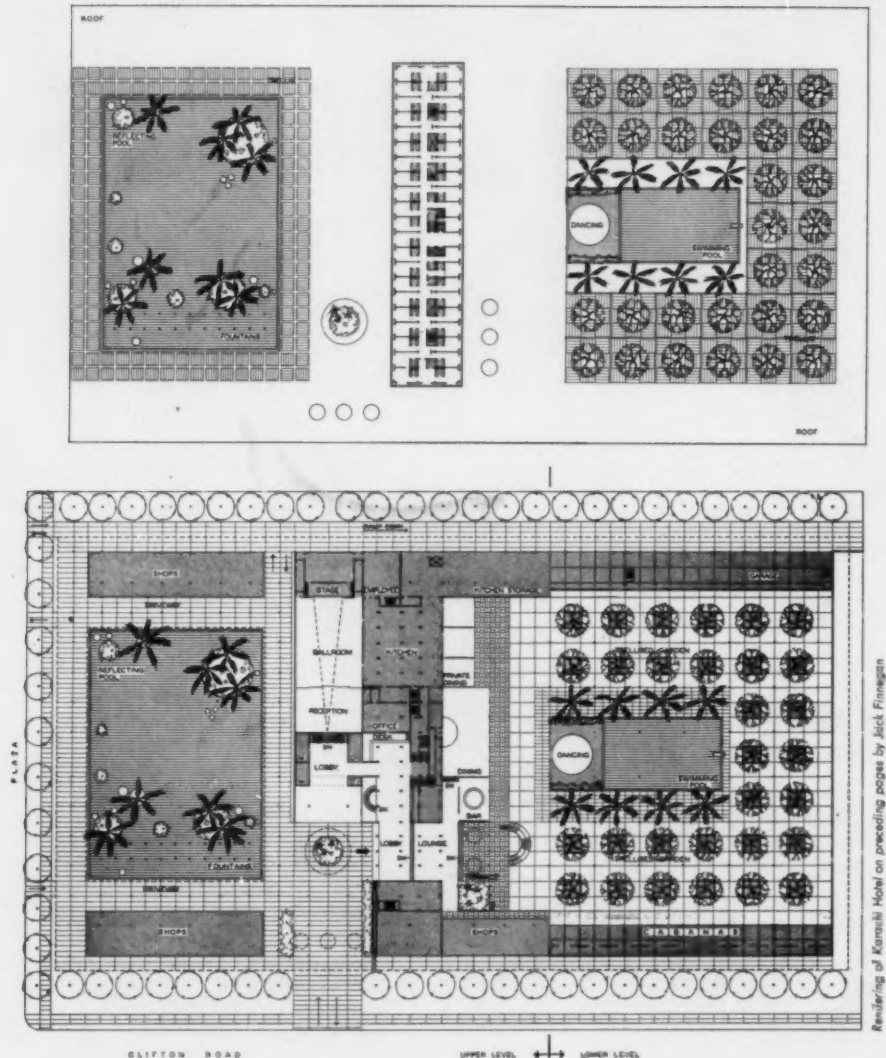


Photo opposite page, Louis Checkman





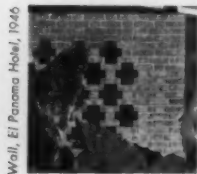




A HOTEL FOR KARACHI, PAKISTAN

A uniquely indigenous character has been given this building for Intercontinental Hotels, by sheathing the exterior with a Moslem-style open screen (see preceding page). Set out about three feet from the glass building wall, the screen provides shade, views, and balconies for 400 guest rooms.

The building has all the facilities of a modern, complete hotel: large lobbies, public dining rooms, cocktail lounges indoors and out, ballrooms, reception rooms, exhibition halls, a coffee shop, swimming pool and cabanas, and a theater. A major feature of the design is a "Lath Garden" on the pool side of the hotel (right). This is a trellis extension of the lobby ceiling line out over the pool and recreation area to temper the sunlight.

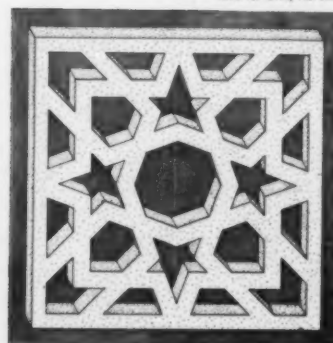


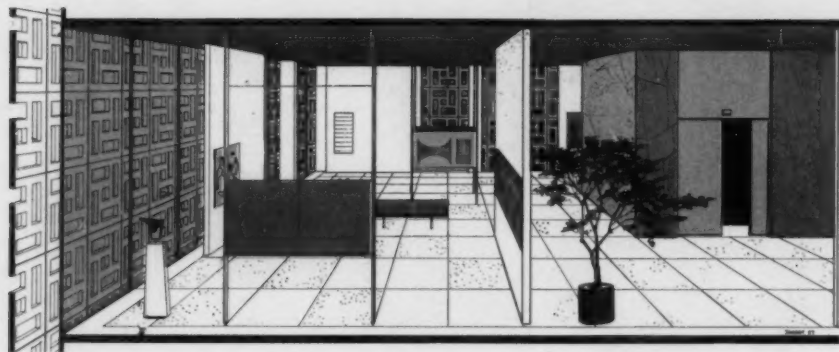
Wall, El Panama Hotel, 1946



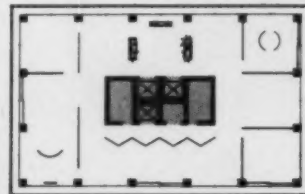
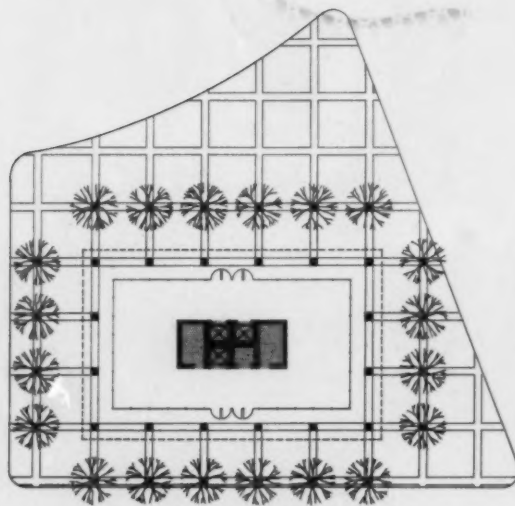
Rendering by Jacoby

Exterior Grill, Karachi





Rendering by Jacoby



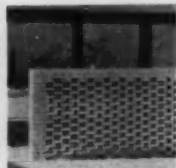
Typical Floor

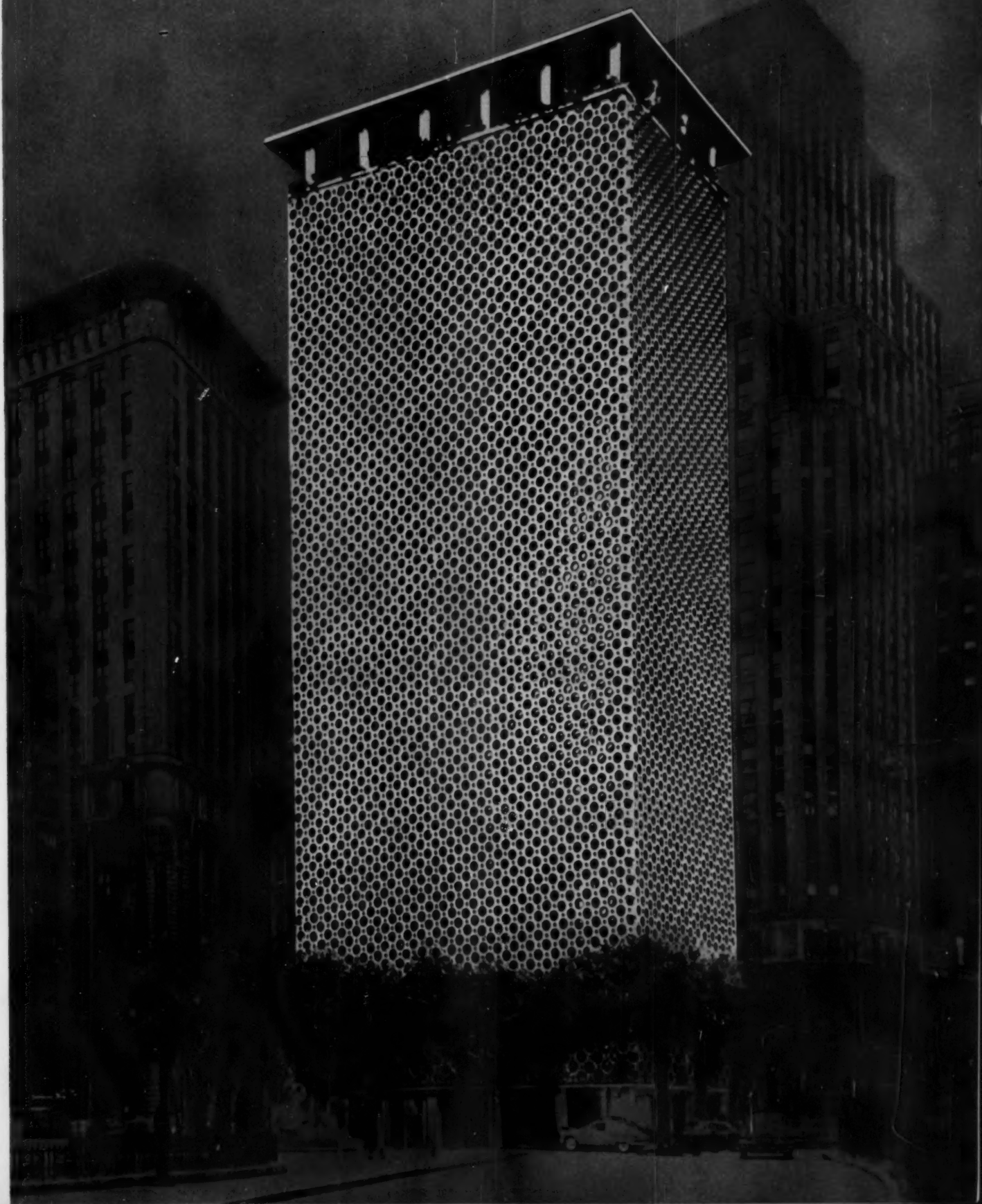
A PROPOSED GALLERY BUILDING FOR NEW YORK CITY

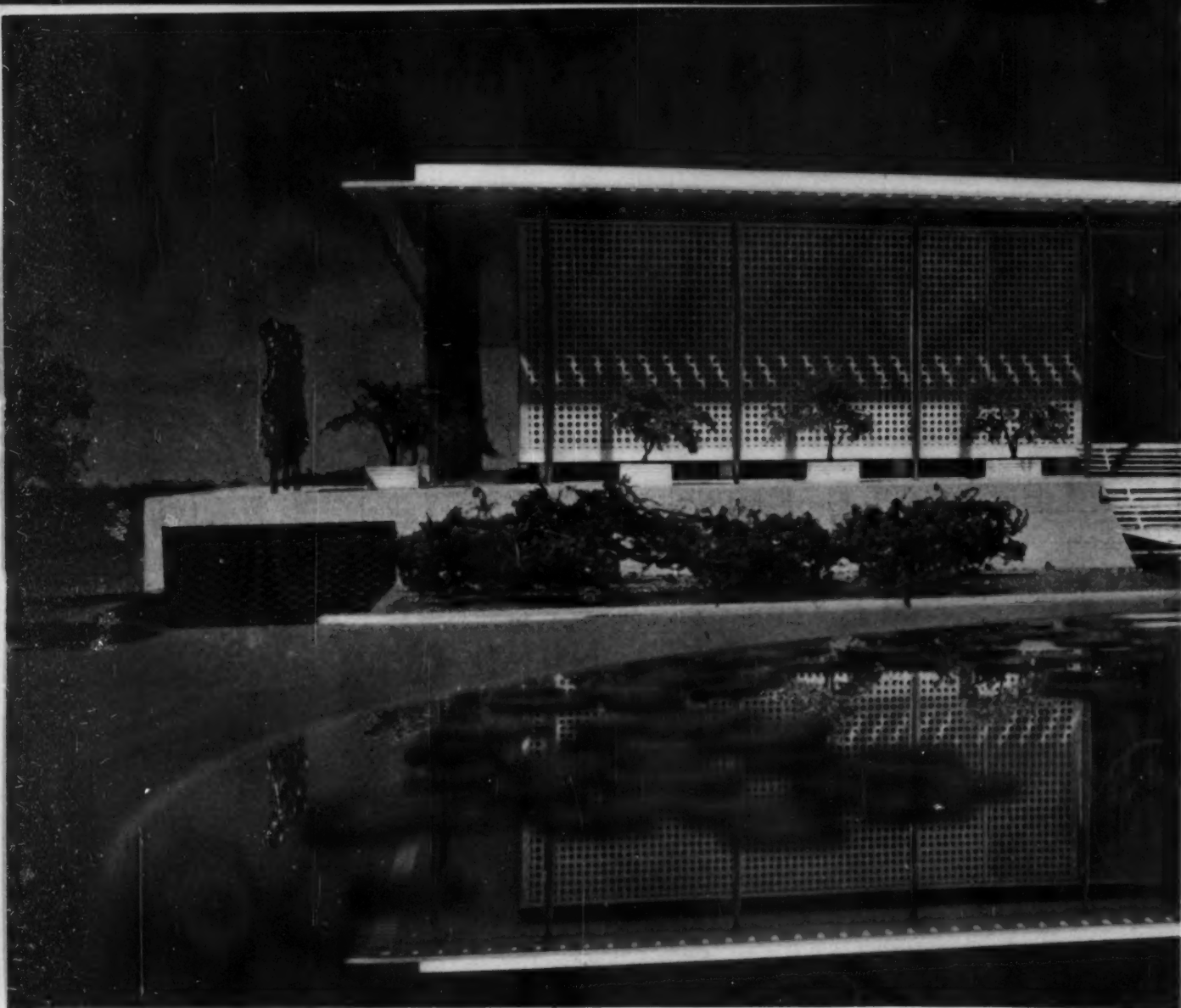
This tower-museum, encased in a perforated terrazzo screen, is planned for the exhibition of contemporary art. To allow the utmost freedom in setting up temporary exhibits, the structure is visualized as tiers of open galleries around a central mechanical core. At the top a restaurant overlooks Columbus Circle and Central Park. A paved plaza at the ground level provides an area for the exhibition of sculpture

in a landscaped background. To add to the flexibility in exhibit arrangement, the exterior walls are formed in three layers. Inside is a tier of opaque sliding screens, next a layer of sliding glass panels, then the terrazzo screen to cut direct rays of the sun from the glass. The design of the screen is tentative — two possible types are shown above and in the model at right.

Wall, U. of Arkansas, 1948



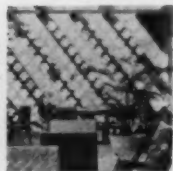




UNITED STATES EMBASSY FOR NEW DELHI, INDIA

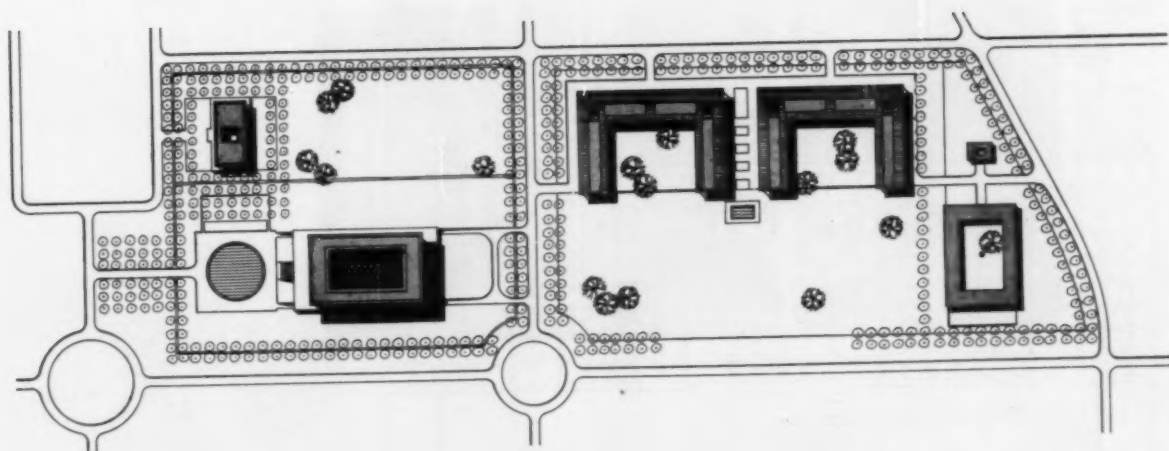
This remarkable Embassy compound succinctly fulfills its paramount design requirements — the clear expression of both friendliness and prestige, in a building appropriate to India. The final group will include a chancellery building (above and left-center in the plot plan), an ambassador's residence, apartments for the staff, and facilities for parking and repairing cars. Inspiration for the chancellery building came from a study of the Taj Mahal: reflecting pools, avenues of trees, a podium as a base, delicacy and richness of texture. Offices and an auditorium are ranged around an open, interior water garden to create a feeling of coolness. The screen exterior is white and gold; the columns are covered with gold leaf. A ground floor, with garage space is in the podium.

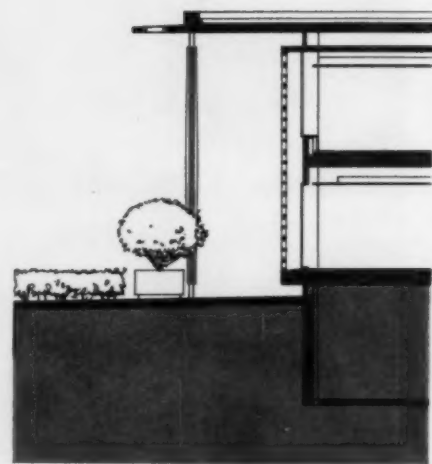
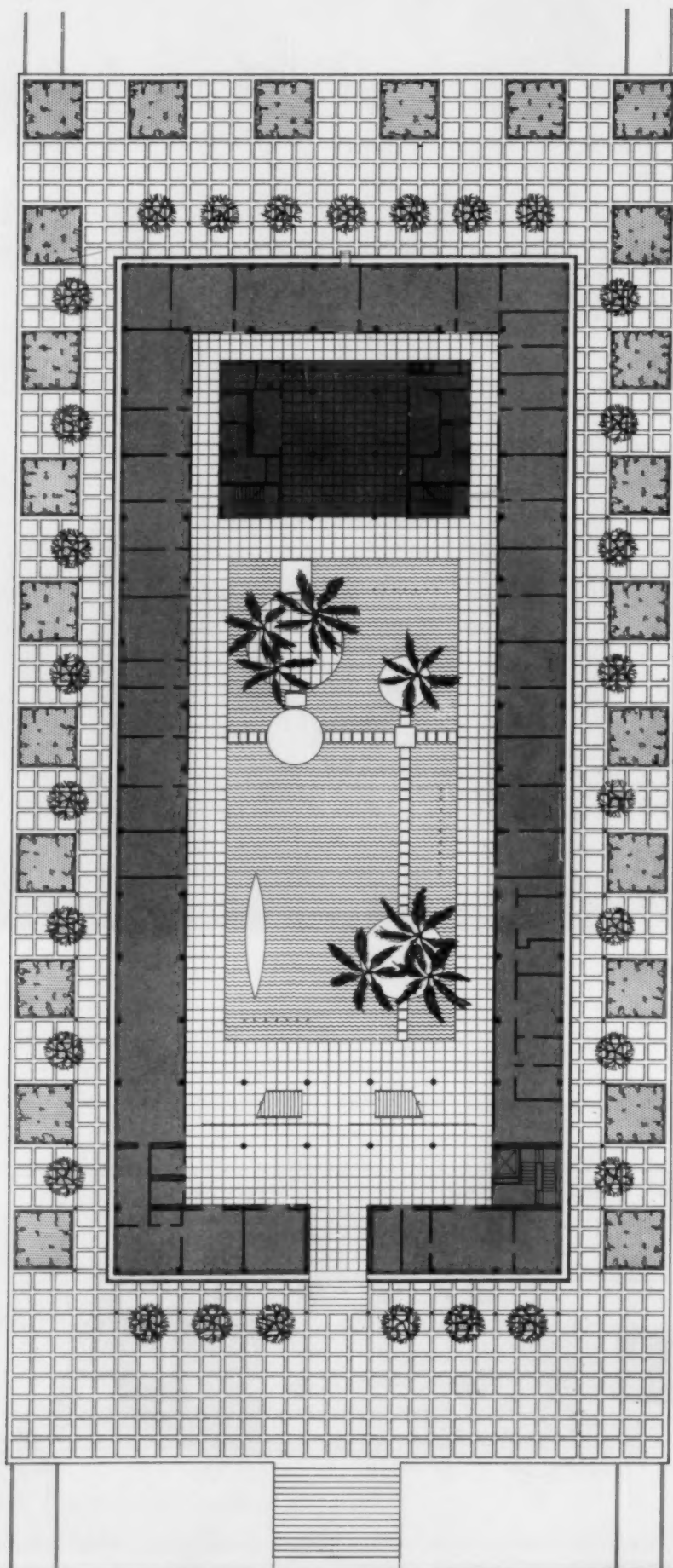
El Panama Hotel, 1946

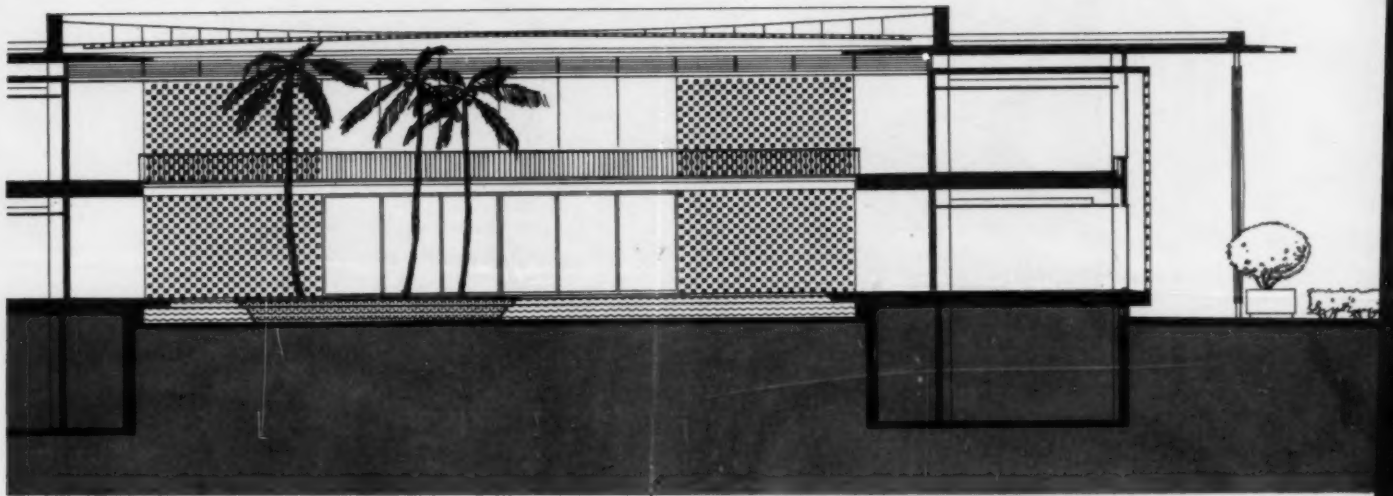




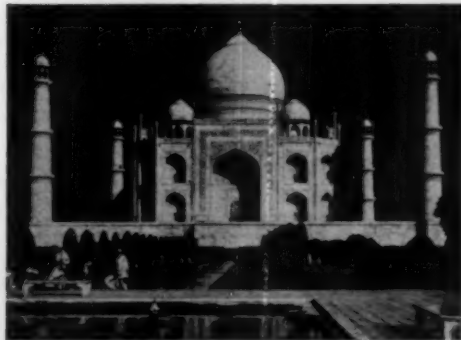
Louis Checkman



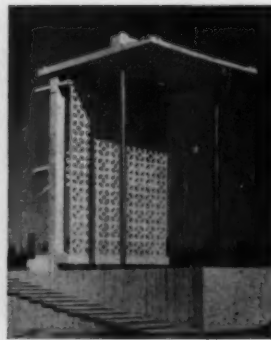




Taj Mahal (Deane Dickason from Ewing Galloway)



Embassy Mock-up



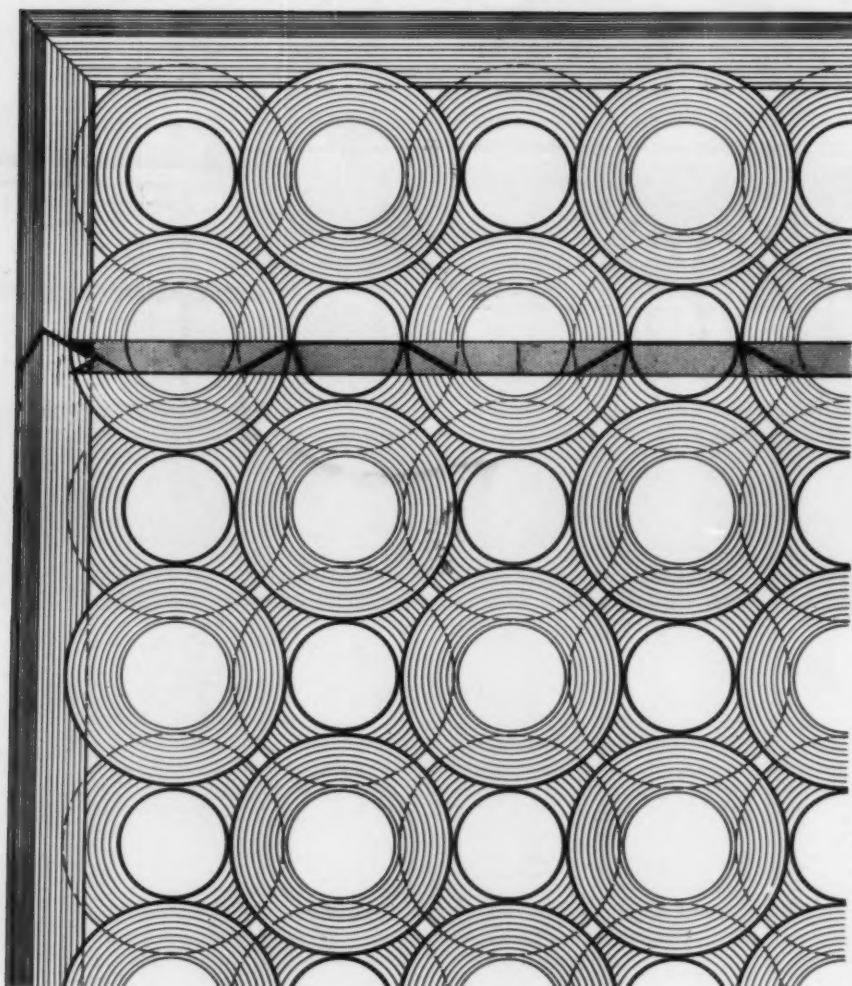


Photo opposite: Louis Chedman

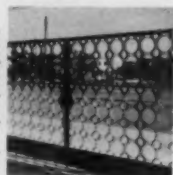
UNITED STATES EMBASSY FOR NEW DELHI, INDIA

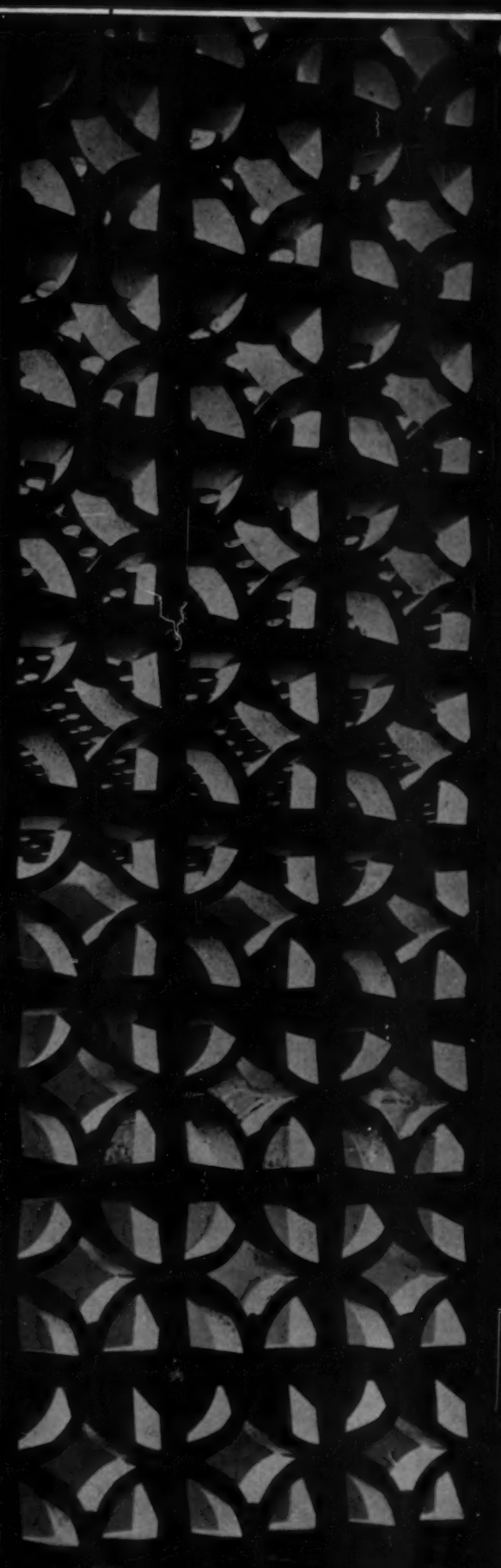
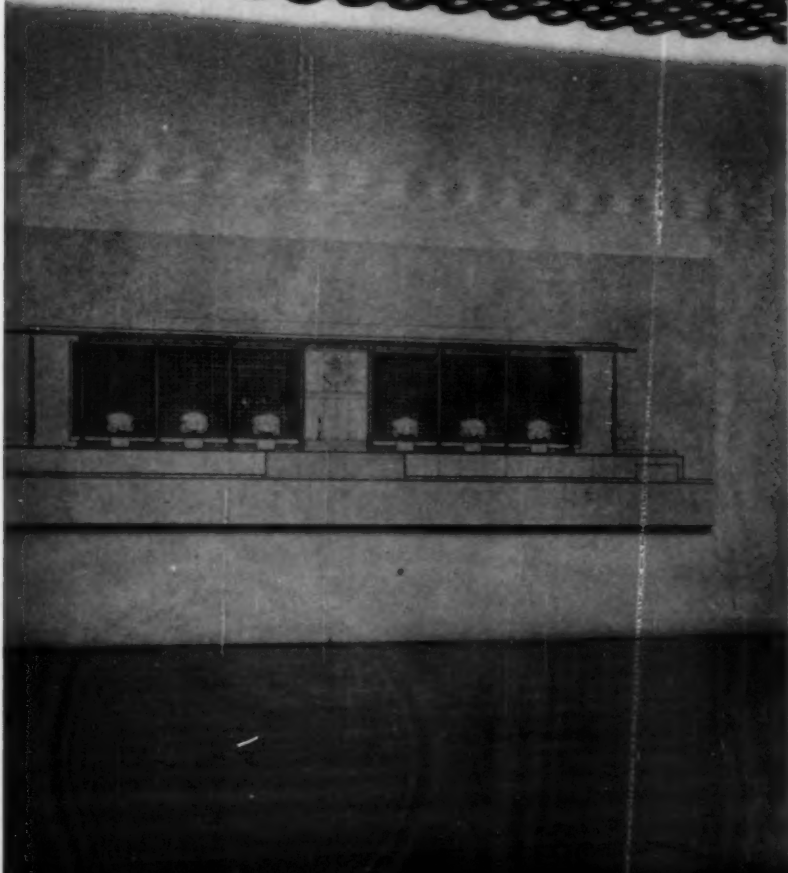
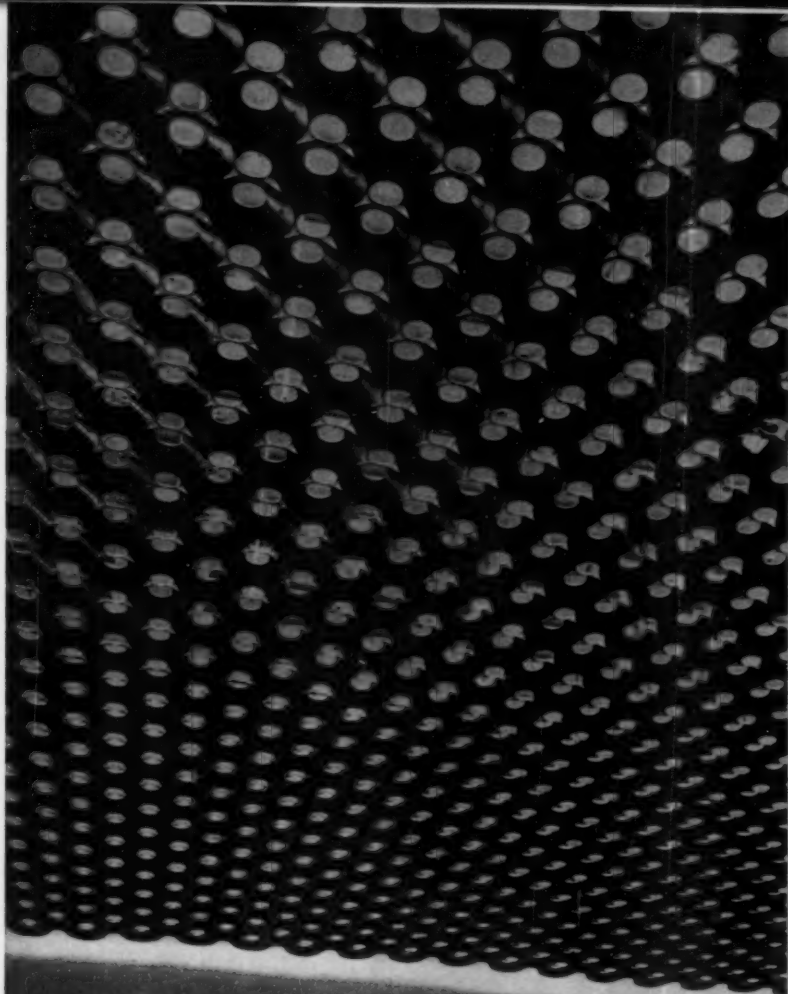
A number of devices was used to dissipate the heat in the chancellery building. An umbrella roof, separated from the actual ceilings, shields the entire structure. This is supported on the delicate colonnade. Over the water garden, with its planting and jets of water, is an arabesque mesh of aluminum to filter the sunlight. Details of this ceiling mesh are shown above and in the photograph (right) of a recent exhibit of the building at the Museum of Modern Art.

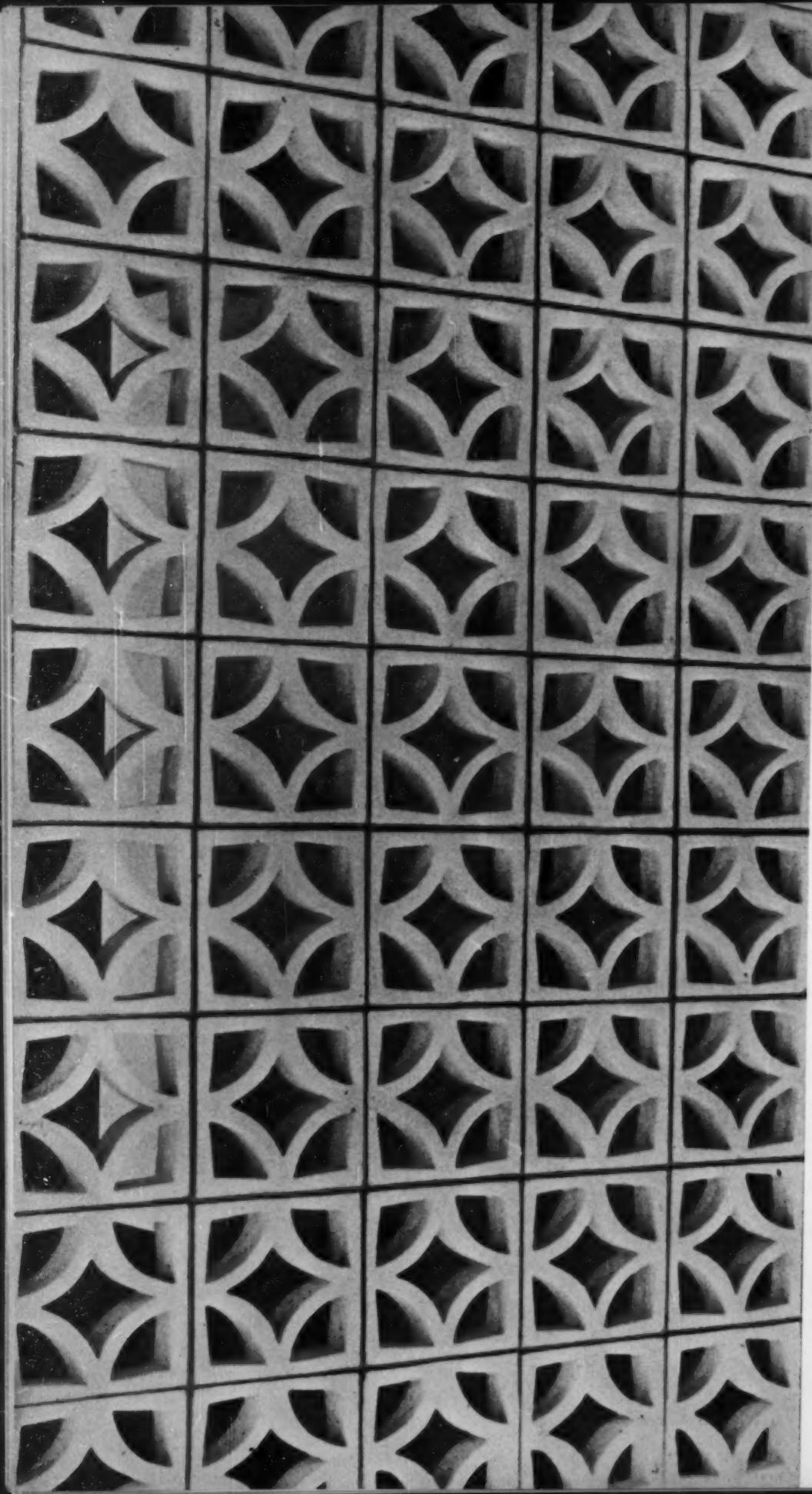
The highly effective grill (right) which surrounds the building, is of pre-cast terrazzo and will be installed completely free of the windows to permit easy cleaning.

The building is air-conditioned for the six months of extreme heat, opened for cross ventilation during the temperate season.

Grill, Hospital, Peru, 1948





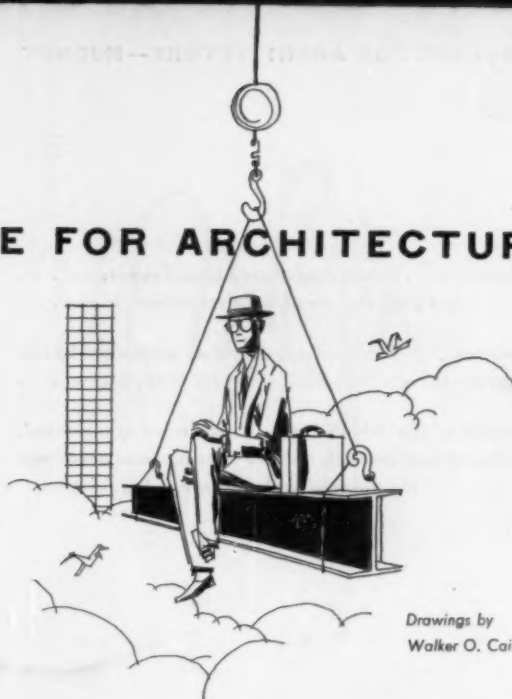


EDWARD D. STONE: NEW DELHI EMBASSY

Rollie McKenna, courtesy Museum of Modern Art

A NEW ELOQUENCE FOR ARCHITECTURE

"... this prime mover
— this architect-laureate of our time
— is the steel I-beam."



Drawings by
Walker O. Cain

By JOSEPH HUDNUT

HISTORY HAS BEEN DEFINED AS the art of remolding the past into a harmony with our desires. Because we read history, not to make us wise but to fortify our preconceptions, we ask our historians to re-appraise past events and their causal relationships in order that we may see our own opinion and passion reflected in their pages.

Historians of architecture afford no exception to this practice. In response to our own urgencies we have witnessed in the realm of architecture many re-shufflings of time, space and prejudice by those who announce themselves as historians. I am not so young that I cannot remember the vogue of Richardson Romanesque, the rehabilitation of Imperial Rome by the Pennsylvania Railroad, the return of colonial architecture to a respectable popularity. I can remember also the disgrace and sad end of all of these styles before the importunities of a race of men who had grown indifferent to all style. And each of these revolutions had its apologist and its historian.

We expect our historians not only to approve each in his turn our changing tastes but also to illumine and defend their congenial narratives — and our tastes — with philosophies of taste. We encumber them willy-nilly with the responsibility of reconciling our preferences with rational truth. To Victorian England, already persuaded of a morality in art, John Ruskin explained Gothic architecture as the architecture of virtuous men. To a more sophisticated — and presumably less virtuous — audience Geoffrey Scott defined Renaissance architecture as an art of superior sensibilities. And to the democratic passion of the American Revolution Thomas Jefferson unblushingly presented the Roman Revival as the architecture of popular sovereignty.

We should not think it strange then if our present historians, finding themselves at home in a bright and delightfully revolving machine, should describe the stream of past architectures as a stately procession

towards that ideal of perfect mechanization which, we are told, possesses the mind of our day or should season their admiration for the architecture of a mechanized world with a philosophy of mechanized form.

"Throughout history," writes a popular historian, "the appearances of buildings and their styles have been determined by the practical techniques of construction — that is to say, by the materials available and the tools with which materials were worked. Greek architecture, for example, was elementary in form because the Greek builder knew only the lintel and the column upon which the lintel rested. Roman architecture was grandiose because the Roman engineer had developed the grandiose resources of concrete vaulting. Gothic architecture, ethereal and daring, rose, as inevitably as the night follows the day, from the pointed arch and the flying buttress." And the author, although careful to assure his readers that beauty in buildings is not wholly a consequence of structural efficiencies — aesthetic experiences, taste and fashion being also elements of beauty — nevertheless leaves them with the impression that aesthetic sensation, taste and fashion are after all redundancies: pleasing appliqué which do not modify essentially the character of architectures. The column, the vault and the flying buttresses are thus made the prime movers in the evolution of architectural species and the fundamental sources of expression throughout the ages. And in our time this prime mover — this architect-laureate of our time — is the steel I-beam.

What is needed, it seems to me, is another history. We should ask our historians to examine more curiously this concept which, ever since Choisy wrote his *L'Art de Bâtir*, has haunted their minds: this concept of structure as secret architect of temple, *thermae*, cathedral and skyscraper. Their minds quickened by the perils which now confront architecture they might then re-invigorate our art with a newer and less devastating doctrine.

*"The Greeks . . . celebrated quietude and sweetness . . .
used only the simplest of structural forms . . .*

*The Romans . . . achieved power and magnificence by the
use of great concrete arches invented for that purpose . . .*

*The peoples of the Middle Ages . . . had need of a symbol,
ethereal and soaring, and for that purpose developed
the pointed arch and the flying buttress."*



I shall offer such a history — not my own but one which is in need of a novel pronouncement. It shall be brief and it shall occupy only one paragraph.

The Greeks, who lived in the sunlight, celebrated in their temples the quietude and sweetness of the natural world in which their religion was born. To that end they employed in their temples only the simplest of structural forms: the rectangular lintel and its supporting column. The Romans, to whom power was a virtue and magnificence a delight, achieved power and magnificence in their buildings by the use of the great concrete vaults invented for that purpose. The peoples of the Middle Ages, having built a spiritual universe around their life on earth, had need of a symbol, ethereal and soaring, and for that purpose developed the pointed arch and the flying buttress. In no one of these instances was the idea to be expressed inherent in the structural device through which it was made explicit and visible. In no instance did the idea derive its origin from such a device. In no instance was the eloquence of the architecture a consequence of a perfection in technological resources.

This precedence of idea over technique is most clearly illustrated in the history of the Gothic cathedrals. No one, of course, will deny that the precision and elegance of Gothic vaulting witnesses a builder's delight in his craft and it would be strange indeed if that delight had not been shared by those who employed him; and I think it probable that the intellectual control which is evident in Gothic plan and structure — the fusion of so many diverse energies into an organic pattern — afforded to the medieval mind satisfactions not less trenchant than those which they afford the receptive mind of our day. Nevertheless these satisfactions could not have been conceived as the central intention of Gothic architecture. Clearly they are parallel or contributory enjoyments and are by no means essential to the idea and feeling of the cathedral. Idea and feeling had their genesis, not in the experiments of engineers,

but in the meditations of the cloister. The influence that dissolved in light the dark vaults of the Romanesque abbeys was the monastic vision of the Celestial City. The history of the cathedral is the history of a progressive translation of that vision into glass and stone.

No one, happily, told the Gothic architect that he must imprison the Celestial City within the reasonable laws of masonry construction. To raise the Romanesque vaults into the sky, to give resiliency and grace to the supporting arcades, and to surround the sanctuary with vista and light the architect contrived a nice order and balance of pointed forms. These transfigured the Romanesque pattern without, at first, any violence to the traditions of masonry; but that rationalism sufficed for only a moment. Order and balance had to give way almost immediately before the urgencies of the spiritual idea. Already in the choir of Saint-Denis, the birthplace of Gothic architecture, the pointed ribs are designed, not with reference to the true nature of stone, but actually in defiance of that nature: the stones, inflexible and crystalline, bend and become fluid, the inert masses are changed into lines of action and energy, and it is as line and action that they embrace the Celestial City.

From that time forth the architect of the cathedral progressively ignores the lithic basis of his pattern. He diminishes the weight of his arcades, attenuates as he lengthens the shafts which support his vaults, ever more fragile, and around the perimeter of his building march the rhythms, ever more ethereal, of that most questionable of engineering expedients, the flying buttress. Neither the architect's experience nor his common sense, neither his science nor the intuitions of his practical mind, prevail against the imperatives of the Christian aspiration; his vaults must be ever higher, their supports more slender, until all lithic character and lithic energy are erased. There remains only a linear frame. Light, pouring in splendor from all sides, obliterates even that frame. We stand no longer in a building of stone. The arch is no longer present, being represented



by a line; the pressures of the vaults and buttresses are abstractions and must be known, if at all, by analysis. Nor will the spirit of the cathedral rest until the unsubstantial fabric has been drawn out to a still greater tenuity; until piers and arches, traceries and the ribs of vaults, reach the point of collapse; until, at Beauvais, they do collapse.

I do not pretend that there is in our day a passion so deep and pervasive as thus to direct and illumine the art of architecture. I am of course illustrating a principle. Expression in architecture springs from idea and feeling. Structural expedients come into being as the means by which idea and feelings attain a visual language. And to these premises we may now add an inescapable deduction: structural virtuosity and structural candour are secondary virtues in architecture.

I must admit that such a judgment is subjective in nature; but I shall maintain that it is not less subjective than the theory of those who discover in the column, the vault and the I-beam the source of meanings in architecture. These are indeed objects set solidly in space but that which they signify must be constructed of materials less frangible. I do not find it fantastic to believe that the significances of buildings precede a material realization.

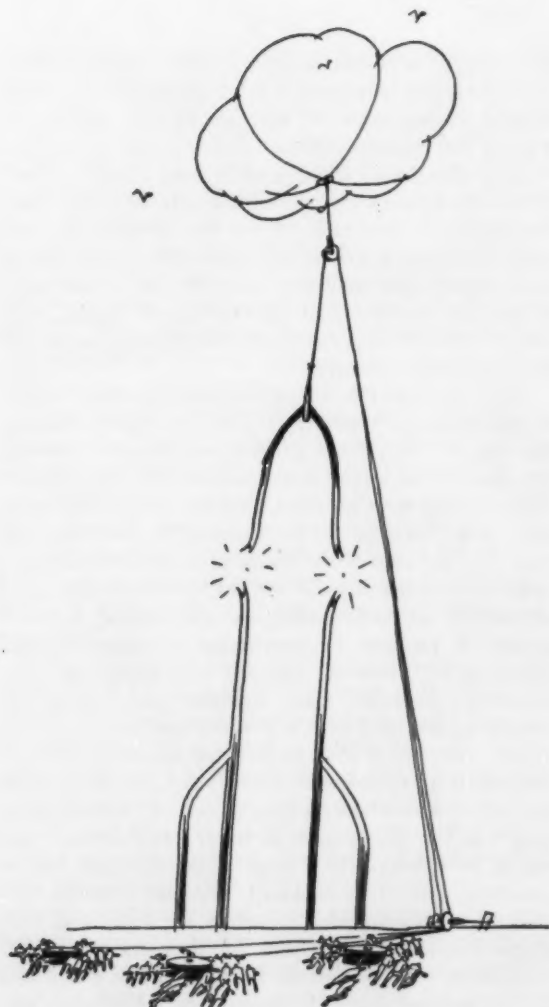
I think that all mechanical ingenuities are (like paintings and poems) the children of popular desire and contrivance. The first printing press, for example, was not invented by Gutenberg but by the hunger of a people for the hidden truths of the Scriptures. The first airplane was lifted from the sands of Kitty Hawk, not by Orville and Wilbur Wright, but by a nation's longing to command the thoroughfares of the sky. And those who think that the force which condemned Edison to his life-time of labor and experiment was his need for money and fame little know the ways in which a nation's will can possess, torture and exalt the noblest of her sons.

Scholars have spent no end of research to discover

the inventor of the skyscraper without perceiving that the skyscraper was created by a people's need for an avenue of expression. It was not merely because we wanted to escape the crabbed streets of Chicago that we evolved this most typical of all modern building types; it was also because we wanted to exhibit in visible form the confidence and pride of our new republic. We had need of a symbol. The skyscrapers which at the turn of the century rose suddenly from the soil of our great cities, like sunflowers at the advent of Spring, were driven upward not by the dull science of engineers but by a romantic necessity.

It is true that this necessity became confused in the neighborhood of Wall Street with a necessity, scarcely less urgent, for splinters of Paris and Rome — a necessity that led to some scenic excesses. We may assume, remembering these excesses, that the romantic impulse may make itself felt in skyscrapers in more than one way. The life that is the theme of architecture is not a specially selected phase of life but the whole of it, mean or exalted, ugly or beautiful; and a skyscraper, however prosaic in purpose, is nevertheless an object through which many kinds of thoughts and imaginings may function. No doubt these thoughts and feelings are sometimes less profound in a skyscraper than are those which, quite apart from its architecture, must inform a cathedral; nevertheless they may exist and make themselves felt. And whatever may be said of "slavish imitation" in the skyscrapers of lower Manhattan — and surely they belong to a page of architectural history somewhat less than sublime — the fact remains that they were charged with meanings by those who built them. Meanings, at any rate, for those for whom they were built. The Woolworth Building, when I first saw it, was peopled not with brokers and commission men but with promises and enchantments. I knew that it was an advertisement — like the newest skyscrapers on Park Avenue — but it was not chained to the ground by a theory of constructivism; and beneath its quaint

"What is the chief characteristic of the tall office building: And we answer at once: it is lofty"



"Nor will the spirit of the cathedral rest until the unsubstantial fabric has been drawn out to a still greater tenuity . . ."



medievalism the Woolworth Building satisfied for the moment my need for that reassurance for which height had suddenly become a national symbol.

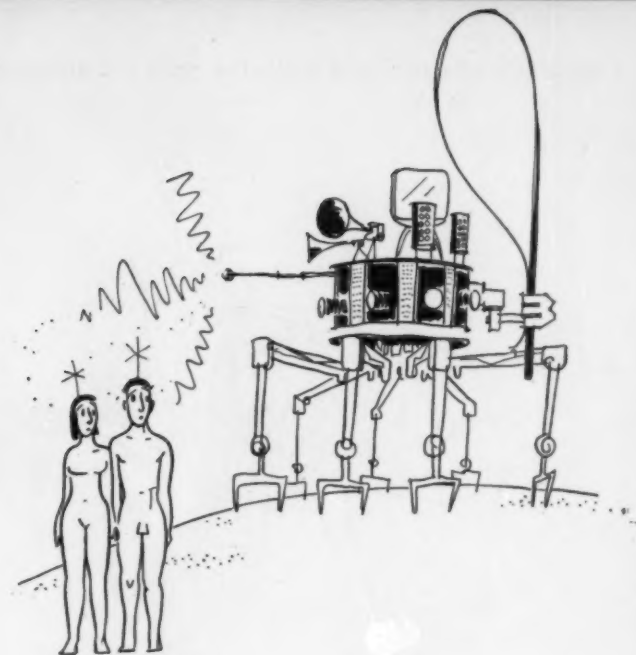
The command over our imaginations which height had assumed is eloquently expressed in a passage written by Louis Sullivan and separated by less than a paragraph from his famous pleas for logical analysis in the design of skyscrapers:

" . . . We must now heed the imperative voice of emotion. It demands of us: What is the chief characteristic of the tall office building: And we answer at once: it is lofty. This loftiness is to the artist-nature its thrilling aspect. It is the very organ-tone of its appeal. It must in turn be the dominant chord in expression. The skyscraper must be tall, every inch of it. It must be every inch a proud and soaring thing. . . ."

The true excitant of the imagination then was not the steel structure and the necessity of confessing its presence but the loftiness: the loftiness which to the artist-nature was the thrilling aspect of the skyscraper, the organ-tone of its appeal. The architect puts aside his theory and turns to the messages of his heart, finding a source of expression not in that which he has been taught but in that which he has felt. He turns from understood relations, accessible to the intelligence, to those relations which are accessible only to the imagination. It was at that moment that the skyscraper ceased to be a work of engineering and became a work of architecture.

I am sure that Louis Sullivan did not in his glowing paragraph conceive height, an objective characteristic of the skyscraper, as a subjective characteristic. Height was the thrilling aspect of the skyscraper because he had discovered in it a force and power, a glory and pride; and that force and power, that glory and pride, were essences drawn from the civilization that lay around it. This proud and soaring thing was a similitude of this land.

"... with a solemnity of speech that might have become the Pythia above the afflatus of Delphi — mechanization has taken command."



A collaboration of head and heart is a distinctive characteristic of the art of Louis Sullivan and, in my opinion, a distinctive characteristic of American culture. We are travestied by those naked buildings which proclaim a grim realism in the land they pretend to represent. Are they not, after all, an importation? They represent, not America, but America as seen from across the sea. Louis Sullivan was less hesitant to show ourselves as we are.

I have heard it said — and with a solemnity of speech that might have become the Pythia above the afflatus of Delphi — that we are living in a mechanized world. Mechanization has taken command. Overwhelmed by our inventions we have become conditioned here in America to life in a precise and ever-moving machine. Our ambition is to enrich the world with machines ever more efficient. Mechanization therefore will inevitably take command of our architecture.

We ought to reject such appraisal with a greater warmth of resentment. If we have accepted with gratitude the gifts of the machine we did so in order to use these in the making of a better way of life — not for ourselves merely but for the world — and that which we gave the world was well worth having. Our engines are in truth the implements of an impulse which lies deep in the culture of this land. In spite of their intimacy to our daily lives our machines remain surface aspects of life which have never impaired the idealism which they overlie. We should not be ashamed of that idealism — not even in our architecture.

It is not the function of art to set forth the material circumstances of a civilization. The ways in which buildings are adapted to new uses and to new techniques are of course of the greatest practical importance but they have little to do with the substance of architecture. To be factual and logical is to be as superficial in architecture as it is in life. The arts have only one important function: to define and make eloquent the experiences of the heart. Except as a means to that end ingenuity and

contrivance are no concern of the arts. The art of poetry is not exalted by the invention of new words — no, not even by the invention of the typewriter. The art of painting gains no new dignity from new colors spread upon the palette of the painter — no, nor by the substitution of the palette-knife for the brush. These are new media, useful to widen the range of techniques, but they have in themselves no new meanings. Nor is the art of music made more magical in the intricacies of the Philharmonic than in the slender orchestra of Mozart; and Beethoven, after all the thunder of his nine symphonies, wrote his most sublime music for a quartet of strings. The notion that the arts progress with the evolution of techniques is the most dangerous fallacy in the architectural thought of our day. How could the arts progress when at all times they are voicing, not event and circumstance, but the experiences of man's inward life, unchanged over a thousand centuries?

The art in architecture consists, as it does in all avenues of expression, of ideas and imaginings — and in that indefinable quality which Freud calls the *feelings* of ideas and imaginings. The art in architecture is poetry, a poetry that functions, not in words, but in constructed fabrics. Such a fabric becomes architecture when it is filled with a poetic content.

Our architecture, like our poetry, is strangely silent with respect to the most salient characteristics of American culture. Among these — if I may pretend to such knowledge — is our faith in a philosophy that sanctions freedom and personality, enterprise and tolerance. We should not, I think, bewail the fact that we pay for these with some surface vulgarities. We have also a religion of love, not superficial but active, which ought to compensate us for a spirituality somewhat less fervent than that which raised the great cathedrals; and there is also, even in small towns and villages, a desire to be hospitable to ideas, to seek beauty, and through idea and beauty to give our daily lives dignity and purpose. These are transcendent qualities which will sur-



*"In spite of their intimacy to our daily lives
our machines remain surface aspects . . ."*

vive the corrosions of the great wars and the unwanted responsibilities which these wars have placed upon us. Surely they will some day find their way into our architecture. It would not surprise me to learn that steel construction was invented for that purpose.

One thing is certain: we shall not build these qualities into our buildings by the exercise of that outmoded instrument, the intelligence. Heaven forbid that I should ask architects to be unintelligent; and yet I shall venture to remind them that there is a frontier in their practice where the intelligence becomes an impertinence. If we start — and of course we must — from rational, or at least practical, premises it must be with the object of arriving at some unsophisticated conclusions. The time comes in the development of every work of art when we must be less concerned with what we know and more concerned with what we have felt. At that point we must be less solicitous of our technologies, less conscious of them. Surely we are now sufficiently practiced in steel construction to use it intuitively, to accept automatically its authority in that kingdom where it is rightfully sovereign and, having acknowledged that sovereignty, let us be free to command steel to our poetic purpose. I do not mean that we should be merely free to give aesthetic trimmings to works of engineering. I mean that we should be free to give structural shapes our own direction and disposition: to emphasize or suppress them, to aggravate or attenuate them, to veil or distort them, and, wherever that is necessary to our purpose, deny their existence.

I know quite well that the noblest qualities of American culture cannot be exhibited in a skyscraper — perhaps not in any building. I have talked about skyscrapers because they seem to me to have sprung uniquely from American thought and feeling and because that was what Louis Sullivan thought about them. Sullivan found in skyscrapers a quality of aspiration, of a rising out of the dull business of getting and spending, and that aspiration he thought — in the teeth of

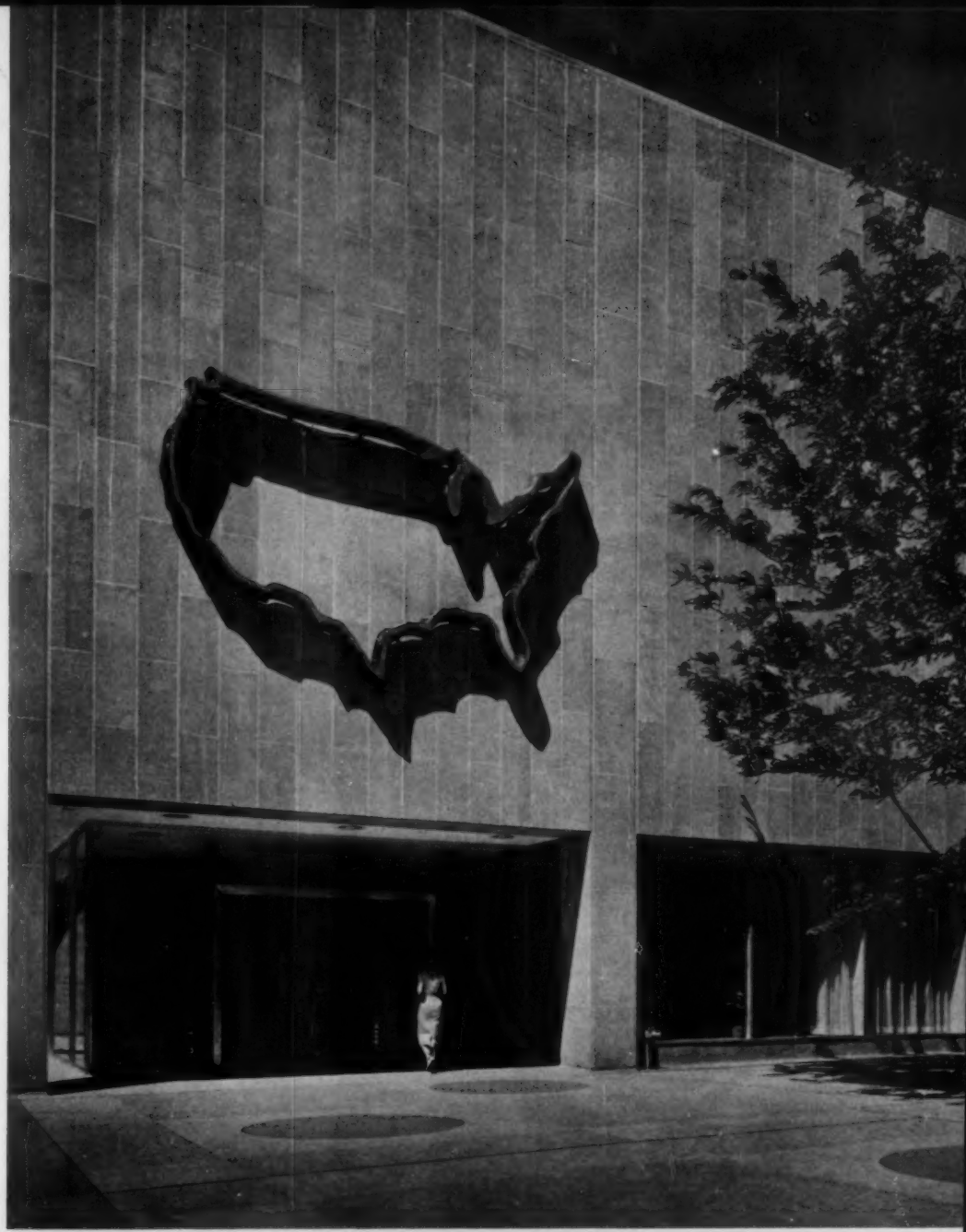
all philosophers of the time — was an American quality. I am not so confident of skyscrapers and yet I agree that there is in them a quality not unworthy of celebration in architecture.

There is also in skyscrapers a romance of a different kind: I mean that visual romance with which they endow our cities. I seldom approach one of our cities from the air without feeling a delight in the upward surge of the tall buildings at its center. These create a new kind of beauty. LeCorbusier has shown us how these brambles at the hearts of cities might submit to the control of an artist and by so doing attain a new grandeur, speaking to us less of a competitive rage and more of that just proportion and peace which is the less published trait of our national spirit. In the beautiful *Ville Radieuse* the skyscrapers consent to live together and to be citizens. They consent to a harmony of proportion and to a consistency of technique; to a majestic rhythm of silhouette; to a poetic artifice; and they consent to live in a garden.

Was the splendor and beauty of LeCorbusier's design created by steel? Did this assurance of faith in man's dignity and worthiness arise from the inward sources of the I-beam? Of course not. Nor did this great romantic arrive at his design in deference to some abstract theory of design — not even in deference to his own theory.

But we must not expect Utopias; and it may well be doubted that there could be happiness in a world where all conflict is stilled, all accidents anticipated. Whether we like it or not discord and confusion will remain for a long time to come the normal conditions of human life.

Nevertheless it is important — important to our civilization — that we should hold before us such idealisms as that of the *Ville Radieuse*. That is one of the noblest functions of architecture: to exhibit in dramatic form the spirit of our epoch, to renew our faith that great things can still be accomplished.

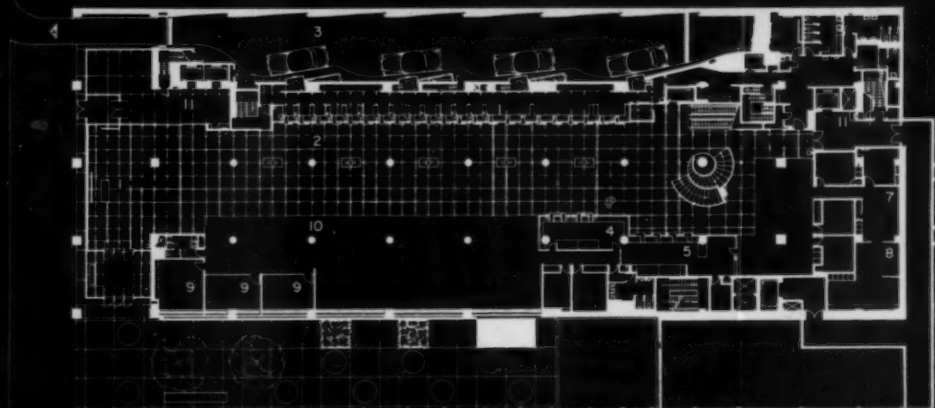


Hedrich Blessing

DEFT REMODELING OF DENVER BANK

James S. Sudler, Architect; Maria Bergson Associates, Associated Interior Designers; Ketchum & Kunkel, Structural Engineers; Swanson-Rink & Associates, Electrical Engineers; Herman & Von Rosenberg, Mechanical Engineers; Edgar Britton, Sculptor, Bronze Doors and Outline Map; Peter Ostuni, Enamelist, Enameled Copper Screens; Robert Probst, Artist, Three-Dimensional Directory; N. G. Petry Construction Co., Interior Contractor; George A. Fuller Co., General Contractor





GROUND FLOOR

THE UNITED STATES NATIONAL BANK

In The Mile High Center, Denver, Colorado.

Particularly in the West, a bank should provide an air of cheerful friendliness while —paradoxically—maintaining an aura of institutional dignity and solidity long associated with banking. In this example, the architect and his associate interior designers, as well as several additional artists, have worked together to transform an unpromising existing structure into a bank of fitting character that holds more than ordinary esthetic interest.

THE EXISTING BUILDING was a flat-slab concrete structure with a one-story difference in its two street entrance levels. Possible finish ceiling heights were relatively low, and the mushroom column caps presented a problem. Introduction of an open volute stair helped tie the levels together and gave the spaces a high degree of unity; special lighting fixtures hid the caps gracefully, as the photograph on the page at left shows.

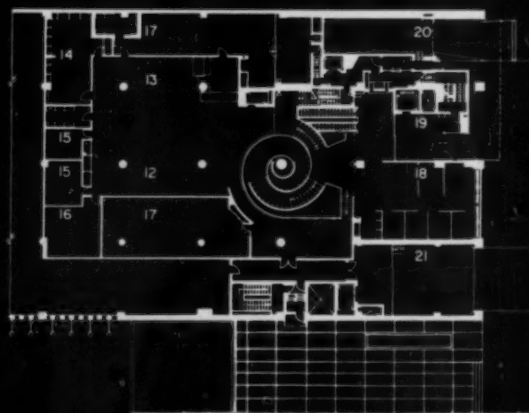
In the main banking area, the floor is light gray-beige terrazzo; the column casings oxidized bronze mesh; the counter walnut and Belgian black marble; the smooth plaster ceiling contains special lighting fixtures made of pieces of aluminum tubing painted white. The back wall is travertine with bronze joint strips; the lobby wall is black marble.

GROUND FLOOR

- 1 Reception
- 2 Tellers
- 3 Drive-in
- 4 Savings
- 5 Loan Payments
- 6 Cashier
- 7 Personnel
- 8 Auditing
- 9 Executives
- 10 Officers
- 11 Building Lobby

SECOND FLOOR

- 12 Trust Officers
- 13 Investment Officers
- 14 Library
- 15 Conference
- 16 Vice President
- 17 Work Space
- 18 Loan Officers
- 19 Lobby
- 20 Ramp down
- 21 Truck dock



SECOND FLOOR

Photo by
Hedrich-Blessing





Top—Reception area: walnut panels; off-white carpet; beige-gray, blue and black upholstery.

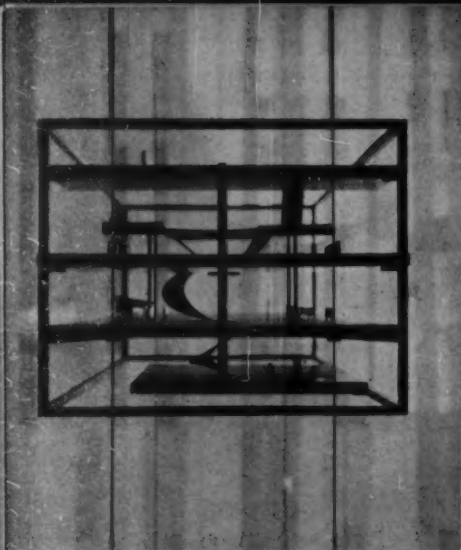
Below—Trust department: gray carpet; walnut panels; white plaster ceiling; dark orange-red



and black upholstery. *Below*—Vault reception area: white enamel and bronze screen; off-white walls; raw silk hanging; upholstery in rich brown, orange-red and sage green.



All photos this page:
Hedrick-Blessing
Photo opposite page:
L. A. Lucas



Above, left—Three dimensional suspended directory in enamel and bronze, with black, white and red accents. Above, right—Check desks featuring a flush, built-in adding machine. Above,



left—Bronze entrance doors by Edgar Britton. Above, right—Counter with hand-contoured change cups. Below—Drinking fountain of special design; cast bronze.





LESSONS IN RESIDENTIAL ORDER



Joseph W. Molitor photos (including page 189)

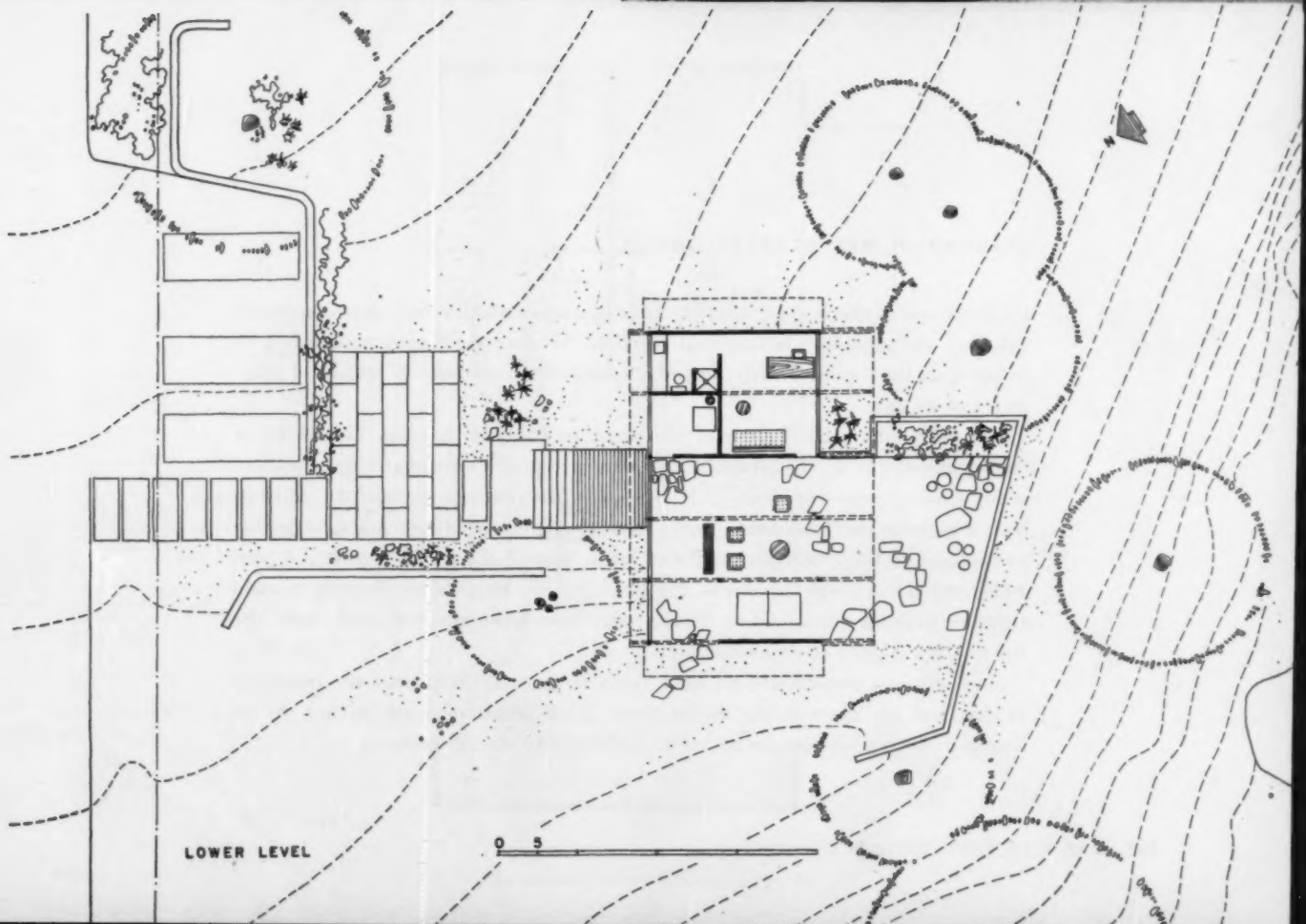
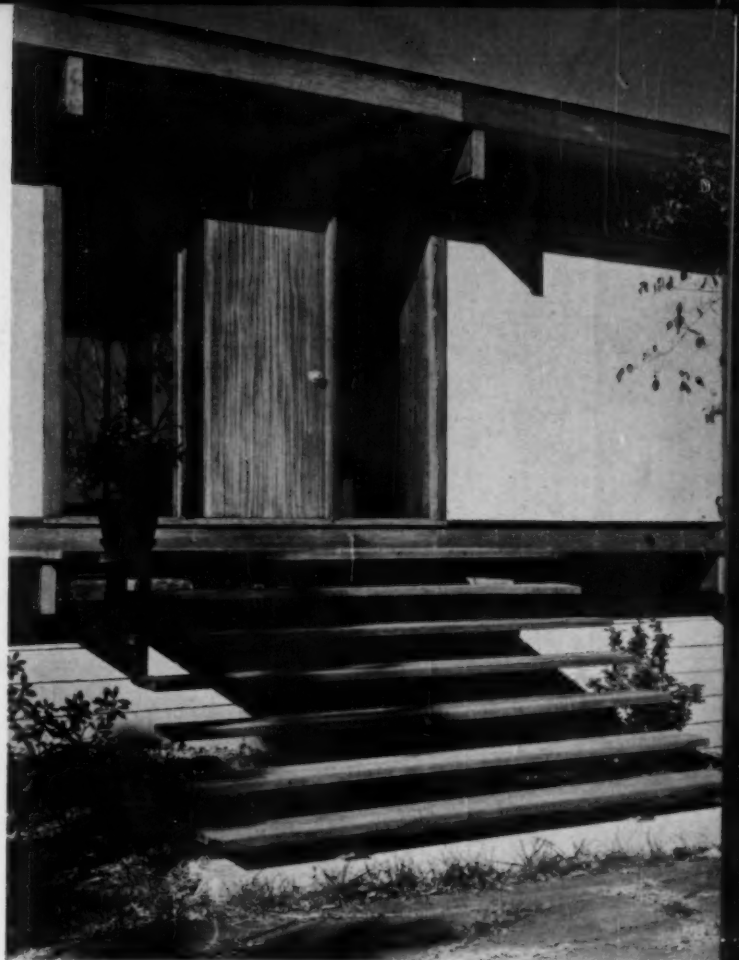
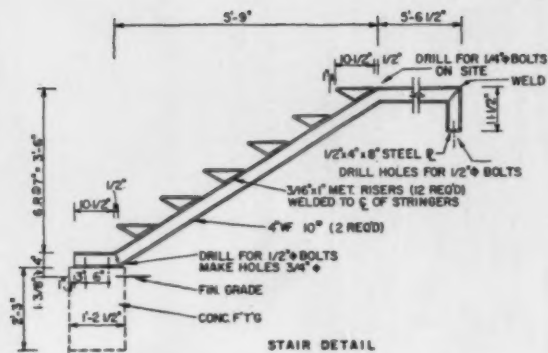
LESSONS IN RESIDENTIAL ORDER

Residence for Dr. George W. Poland, Raleigh, North Carolina. Architect: George Matsumoto (School of Design, N. C. State College). Associate: Wayne F. Koontz

Adroit use of space, symmetry without monotony, a pleasant contrast of textures and the alternation of openness with enclosure characterize the best of today's residential design. This house, despite its small size and low cost, is prototypical in these respects; it offers many lessons in residential order.

THE SITE drops off sharply to the rear, and the view is toward the south — scarcely ideal for North Carolina. Orientation difficulties were overcome inexpensively by placing the house at the rear of the lot where the house itself could be used to shelter a lower-level terrace facing the view; a cantilevered balcony on this side gives further shade to the terrace and increases the openness of the main floor.

Front and rear façades are, as the photos show, strikingly different: the one is more than half enclosed, the other wholly open. At the front, the centered door is flanked by floor-to-ceiling glass panels which permit a view through the house to



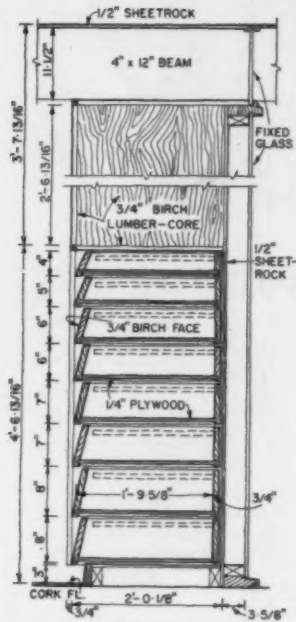


LESSONS IN RESIDENTIAL ORDER

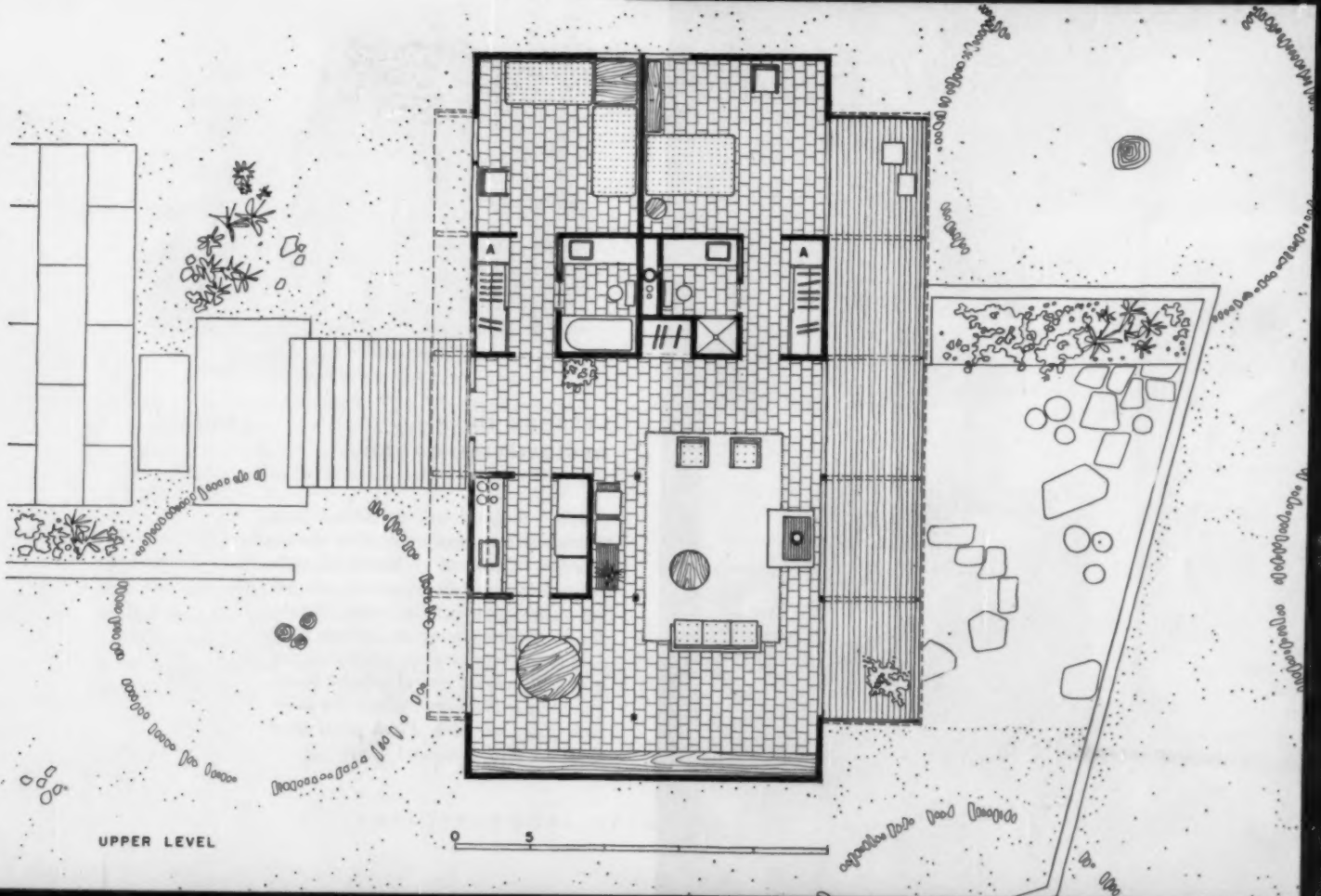
the porch and ravine beyond; cantilevered end wings and open-riser steps emphasize lightness and airiness. The screened porch to the rear adds many square feet of living space to the necessarily limited interior and contributes a columned symmetry of its own.

The most interesting feature of the house probably is its plan. The owner, a faculty member at North Carolina State College, originally wanted an exact duplicate of his architect's own residence (AR, Mid-May '57), but was persuaded that since he is a bachelor and intended to rent a room to a fellow faculty member, he needed two instead of three bedrooms and two baths instead of one. The result is a plan which would work well for almost any small family: note the relationship of main entrance to living area, kitchen, dining room, both bedrooms and porch; note also the uniform spacing of structural bays.

Since this is a small house, no space could be wasted. Bathrooms are minimum in size, and use space-saving sliding doors. Each bedroom gains privacy by an entrance corridor between its bathroom and louvered storage cabinets.



DRESSER SECTION



UPPER LEVEL

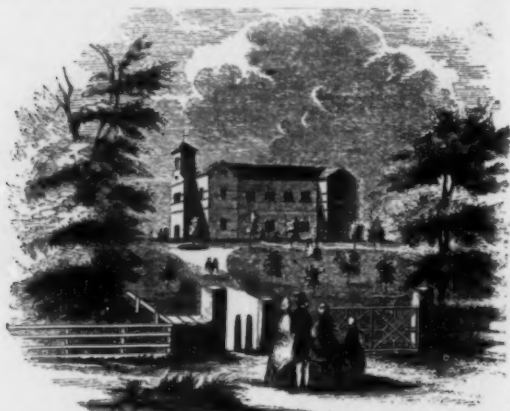


LESSONS IN RESIDENTIAL ORDER

Specially-designed built-in cabinets save floor space and supply diversified storage facilities. Treatment of kitchen as aisle between living and dining areas is unusual but highly practical in warm climate. House is wood frame on concrete block foundation; exterior walls combine stained pine with natural cement asbestos board. Interior partitions and ceilings are sheet-rock, floors are cork. Flush panel wood doors are used throughout

ARE THE NEEDS OF PUBLIC AND PRIVATE SCHOOLS FUNDAMENTALLY DIFFERENT?

WE ARE IN THE MIDST of a great tumult about our school buildings — how many? how much, and where's the money coming from, Uncle Sam? However those questions are decided, the act of asking them has some virtues and raises still further questions, many of which we have dodged. Undoubtedly the to-do has reacquainted many segments of our American world, notably the commercial and political, with the great impor-



Founded in 1791, chartered in 1793, its edifice as pictured built in 1853 from plans by Richard Upjohn, one of the founders of the A.I.A., Berwick Academy in South Berwick could claim to be the oldest academy in the state of Maine.

tance of education. Some among us, facing construction problems and financing difficulties of staggering size, lash out instinctively to say they just can't exist; and all the time the populace keeps growing while more and more school buildings fall into disrepair. There have been many impassioned statements, also, concerning modern teaching methods; the familiar cry about

Johnny's inability to read — which, based on grains of truth though it may be, has the ring of blind hatred of anything new; all the interpretations and misinterpretations of John Dewey's philosophy, which it is the fashion now not to mention openly by name although its effects are unmistakable; the bland assumption by a good many educators that, given proper facilities, proper techniques can create leaders for our people — when the plain fact is that leaders cannot be created, that what can be done is to seek out in individual children the qualities of leadership to enhance, to cultivate and encourage to bloom.

Indeed, our most serious educational fault appears to be our assumption that the mass techniques we have successfully applied to production of things can be equally successful in producing educated, civilized people. Teachers and architects and laymen alike, we have all been guilty of this: of stereotyped classrooms in characterless rows in monotonous buildings on barren sites. True, many devices are being tried to mitigate the effects of the massive increase in school population and our own unimaginativeness — schools-within-schools, quadrangles and courtyards, special programs for the gifted or the slow-to-learn, and so on; these, as examples of what can be done, are the schools we try to publish in these pages. But there are an infinitely greater number of uninspired new American school plants, too many that are downright depressing. As if we had only to provide enough endless belts, press enough starter buttons and let educational machines do the rest!

Perhaps a look at history may reinvigorate our imaginations. The concept of public education now accepted in this country is relatively new. Our public secondary schools, for instance, have existed in something like their present form only a mere century. (In Charlotte, N. C., where public schools are now of a very high order, the

whole concept of the graded school system is even younger!) Our high schools are directly descended from the once-typical New England academy, which was usually founded and supported by a man or a group who had ventured to settle away from the more cultured metropolitan center; it was seldom a proprietary institution; it might be a free academy or a tuition school; a few public-spirited individuals footed the bills. Consider the description of Berwick Academy founded in South Berwick, Maine, in 1791 — the first Maine academy — as reported in *Ballou's Pictorial Drawing Room Companion* before the turn of the century:

"Its (Berwick's) charter bears the handsome and bold signature of John Hancock. The land on which it stands came to the institution only one remove from the red man . . . a number of gentlemen, distinguished for learning, talents, enterprise and liberality, were engaged in the initiative (sic) step of its creation. . . . In 1792 it was assisted by a grant of land from the legislature . . . The number of pupils was originally limited to 40 . . . boys exclusively; but in 1795 females were admitted." The reverend gentleman who sparkplugged the "initiative step" rode a horse from South Berwick to Boston to secure legislative approval of the new academy's charter, just for 40 country boys.

Fryeburg Academy, founded a year later, has an almost identical history. These and others like them, of which fortunately a few are still operating, were conceived as public or semi-public institutions by private individuals who supported them with their own minds, hands and pocketbooks, who at the same time sought for them all the public support that could be obtained. There was no thought of a conflict of interest; the objective was education of as high a quality as the times allowed, and all joined in furthering it. Up to a point, the parallel afforded by St. Edmund's School, with which this study closes, is obvious. The arguments now going on in some states over transportation of pupils to private schools in public school buses may, in the light of such historic precedent, benefit from a different perspective. Are we less concerned than our forbears with providing the educational wherewithal? Should the White House Conference on Education held a year and a half ago have been permitted to virtually write off private schools?

Of the many different kinds of private schools we have been able to include only a few in this short study; actually they are at least as various as public schools and their philosophies differ even more widely. Nearly all of them face financial difficulties at least as serious as the public schools; and all require physical facilities appropriate to their own aims. Many have to make virtues of the shortcomings of their plants, utilizing instead of the latest gold-plated tools of education the human qualities of dedication, love and individual attention to their charges, turning to advantage close spiritual ties or the economy and earthy richness of a rural location. Most have grown in size, though slowly and with parallel development of purpose.

Are there lessons in this for our public schools, for

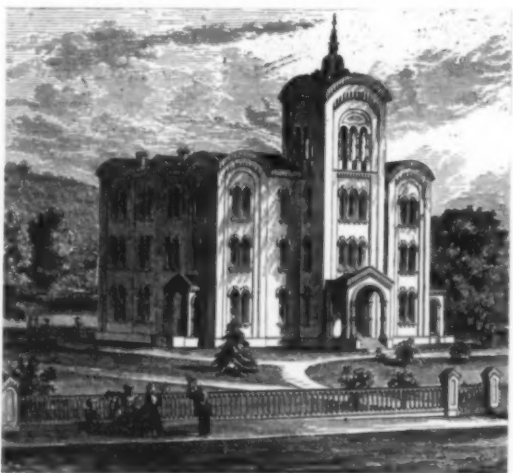


Above, Fryeburg Academy — compare with photograph opposite! — as it was in 1801 when Daniel Webster became its principal

our great undertaking of educating the masses? Are our techniques likely to submerge our aims, and while they're about that, to cost so much that those who decry obvious needs could find in them pretty solid arguments? We do not presume to know the answers to such questions, nor do we believe others have them pat. We do believe, as the founders of Berwick and Fryeburg Academies did, that education is a matter for deep concern both public and private, that school buildings, entire plants and all their equipment, ought to be the best and most appropriate we can produce; and that mass production techniques, though they may become invaluable aids, cannot successfully replace completely the human qualities of individuals however faulty.



Above, English Commons, Phillips Academy; below, Norwich, Conn., Free Academy





FRYEBURG ACADEMY IN MAINE

Just out of Dartmouth in 1801, Daniel Webster became principal of Fryeburg Academy; salary, \$350 annually. In May, 1802, he took his quarter's pay to his brother in Hanover; he wrote: "I had the pleasure of putting (my first earnings) into my brother's hands for his college expenses."



FRYEBURG ACADEMY: GIBSON RECREATIONAL CENTER

Architects and engineers for Gibson Recreational Center: Alonzo J. Harriman, Inc. This is the newest building at Fryeburg Academy. Founded in 1792, the Academy is both a boarding school for students from all over the world and the high school for the children who come from the surrounding rural locality by daily bus. It is co-educational. It has contributed much to the reputation of Fryeburg, "the aristocrat of Maine villages." Some of the Academy's alumni have returned to the village to live; many of this year's graduates are third or fourth generation Ivy League college candidates; outside the village and the state its name is well known. Its concern with students who do not go on to college is equally deep. This is in the tradition of the northern-New-England academy.

So too are Fryeburg Academy's genuinely conservative educational methods. The brick and granite "academic" building, built in 1850 and enlarged in 1930, has desks still screwed to the floor, their tops still bearing the initials of long-departed alumni, in rooms that do not take kindly to modern isms. Teaching is primarily of the 3 R's type, with little apparent progressiveness; yet in actuality its philosophy, slowly modified over the years, is more humane than that of many a school proud of its courses in the humanities, more honestly liberal than many a progressive school.

The school plant for this small, diverse student body covers many acres and includes many types of facilities: the busy home economics department, the well equipped industrial arts shop, the commercial and business department, the Academy Farm with its cattle and acres of fertile Intervale land; conventional classrooms; dormitories and dining facilities — the lounges of the new girls' dormitory and of the Recreational Center provide settings for the occasional departures from routine that help make learning fun. Facilities for indoor and outdoor games are recognized essentials for improving the physical well-being of all the students. The thirty acres of playing fields are constantly being developed; the earlier Gibson Gymnasium, formerly for boys and girls, was extensively changed for the girls' use when the Recreational Center was completed.



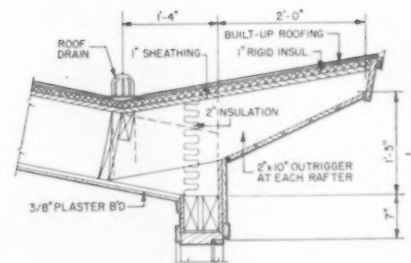
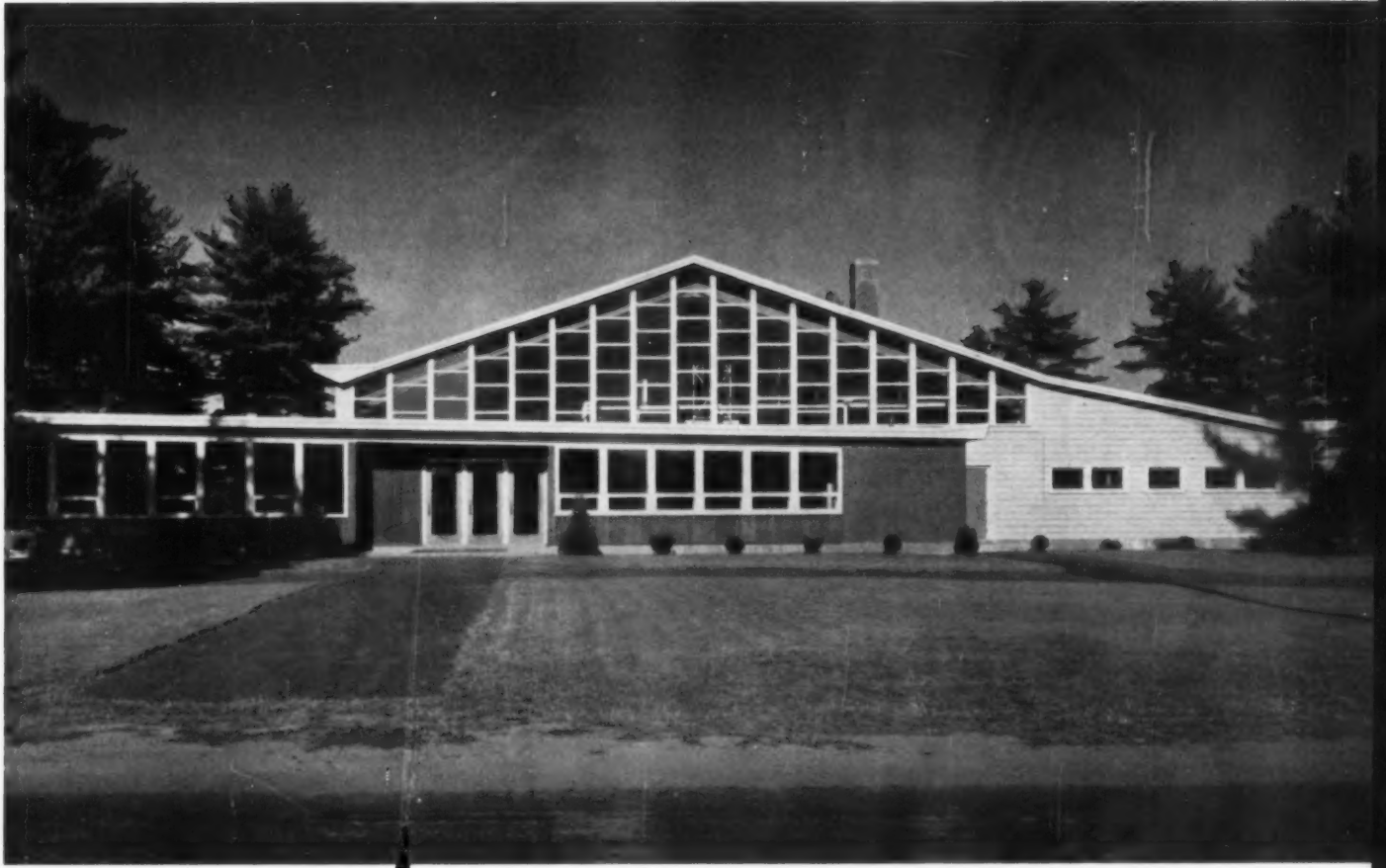
Anderson Studio





One of the older buildings at Fryeburg, before and after remodeling

Joseph W. Mailor





Joseph W. Molitor

FRYEBURG ACADEMY

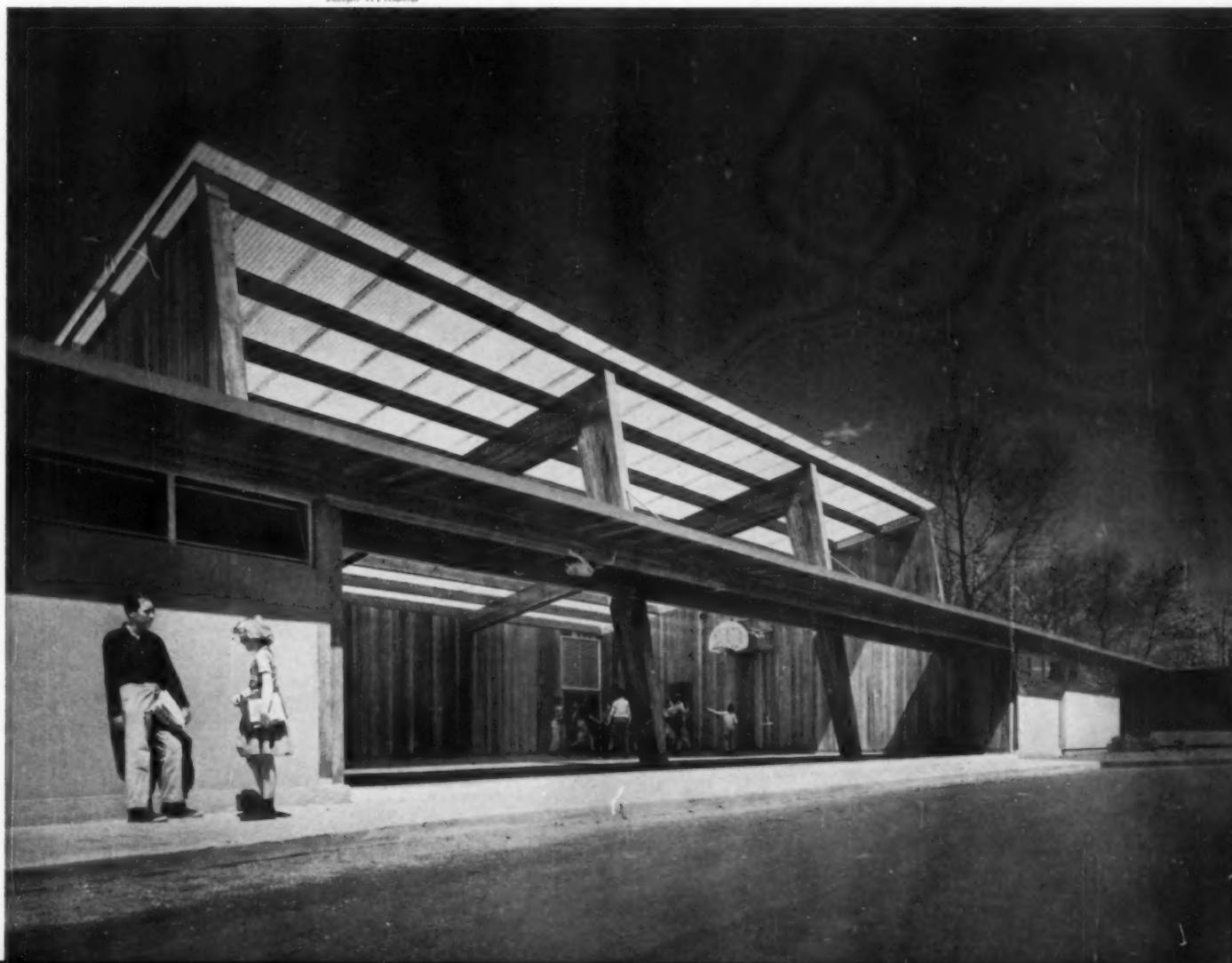
Fryeburg's Gibson Recreational Center is more than a physical education building. The lounge, used also as a music room, has an important set of educational functions: here the chorus and band rehearse, the debating sessions and prize speaking contests take place; here the Friday night dorm record hops are held; here are conducted the many things, all requiring meeting places, that are parts of the life of a small academy.



CONNECTICUT PUBLIC SCHOOL

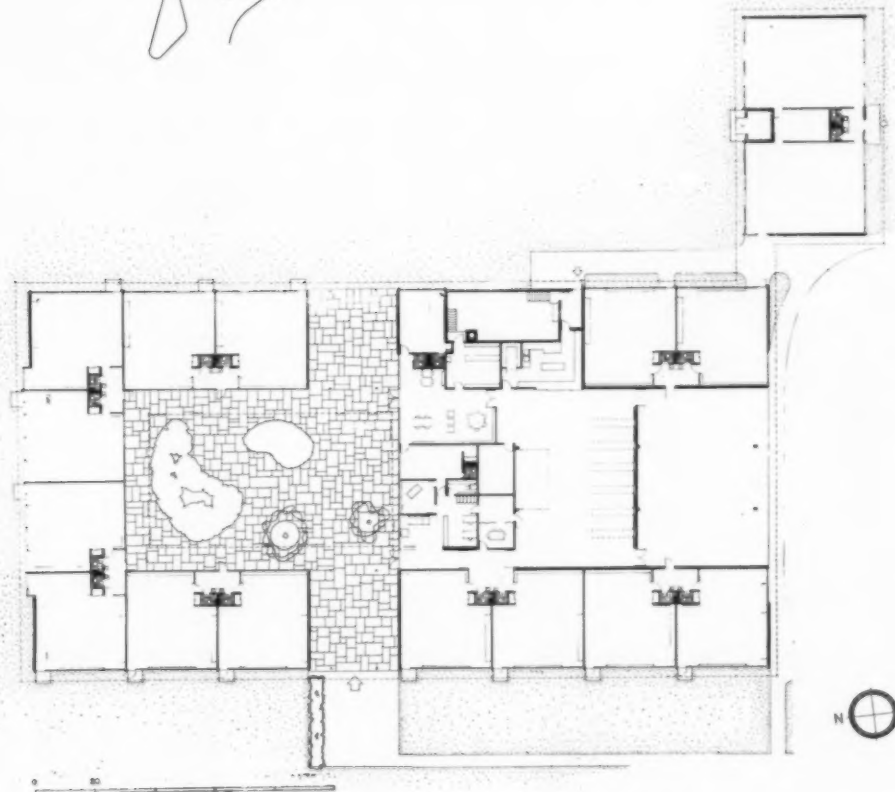
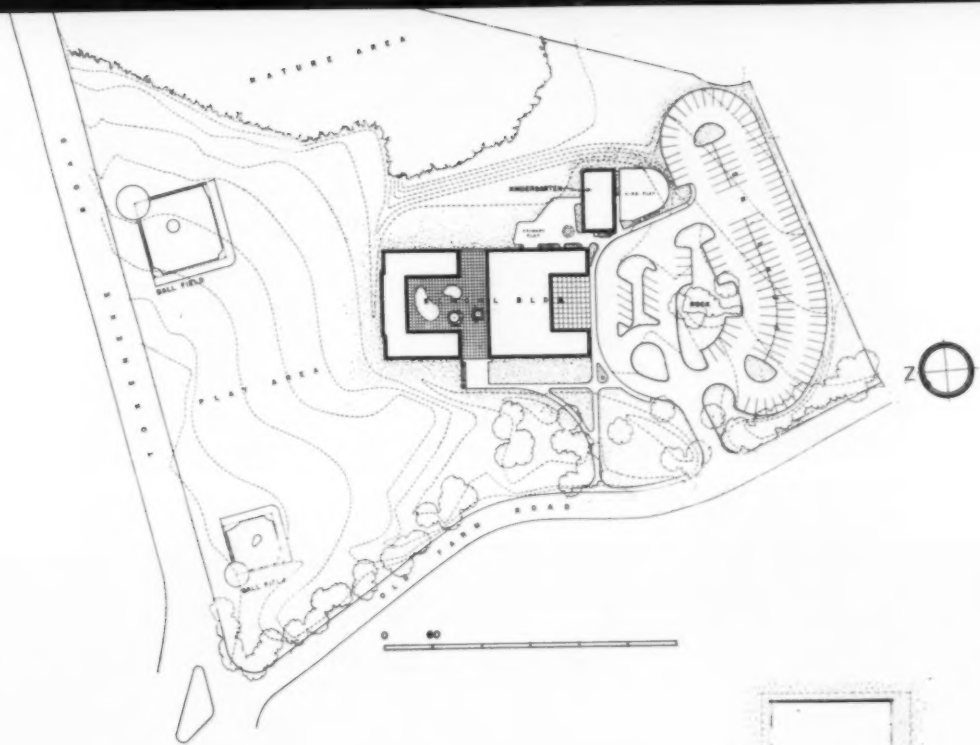
Tokeneke Elementary School, Darien, Conn., O'Connor & Kilham, Architects. Tokeneke affords a decided contrast to the Academy, that strong exponent of healthy tradition shown in the pages immediately preceding. Tokeneke is a public school, for elementary grades; it was completed in time for the opening of school last September. It has been adjudged an excellent example of contemporary architecture — it won an Award of Merit from the American Institute of Architects this year, and it has been selected for exhibition at the Art Festival in Boston. Tokeneke is compact, on a relatively small site; one story, with extensive areas of glass in its walls. Teaching methods are quite advanced; the furniture and equipment incorporate the latest appropriate features. Yet there are parallels: one feels upon entering the building that this is a friendly place where each small child receives personal attention. In part this feeling undoubtedly derives from its architectural qualities — the warm, pleasant materials and colors — and in part it obviously reflects the community's attitude as translated by the faculty and administration.

Joseph W. Molitor



CONNECTICUT PUBLIC SCHOOL





Left, murals at students' entrance; right, multi-purpose room

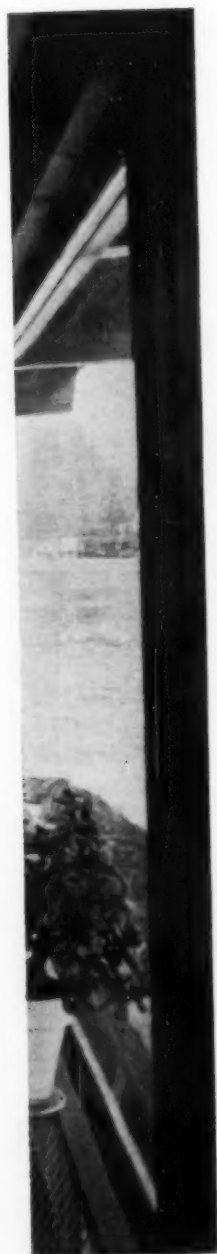


CONNECTICUT PUBLIC SCHOOL

Like pupils at the Academy shown in preceding pages, Tokeneke's students must go outdoors to get from classroom to multi-purpose room, library or office; this, in spite of the cold New England winter, has proved quite satisfactory. At Tokeneke the corridorless grouping of classrooms around the court was adopted partly for economy's sake. The building cost \$14.40 per square foot, neither cheap nor extravagant for the quality desired and the date of construction; but there is less building to house the given capacity, so cost per child was low. The library is something of a monument to Yankee independence; though the state education office objected, the school library occupies a wide, well traveled corridor, thus economizing on construction and making the library a daily fact of each pupil's life.

Joseph W. Molitor





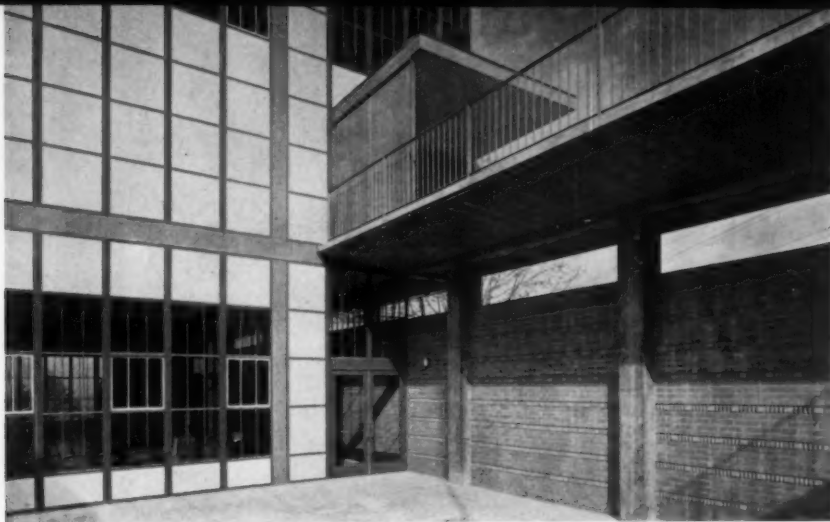
PAROCHIAL SCHOOL IN SEATTLE

Elementary School, St. Paul's Parish, Catholic Archdiocese of Seattle, Wash.; Roger Gotteland, Architect. Serving as an assembly place and a temporary church as well as an elementary school, this parish institution was built in 1955 at a cost of \$11.80 per square foot. The sanctuary occupies what will later become the gymnasium when the permanent church is built. Construction is entirely masonry, with SCR brick used both in normal fashion and, sawed through one row of cores, with rough surfaces exposed to form patterns visible in the photograph across page.

Although the auditorium-gymnasium-church wing is two stories, each level is directly accessible from grade: the church by means of a bridge, the auditorium via an open court sheltered by a high retaining wall. In such fashion was the steeply sloping lot turned to economical advantage. The ease with which the plan can be converted completely to school use, and the simplicity of future expansion, are clear in the accompanying drawings.

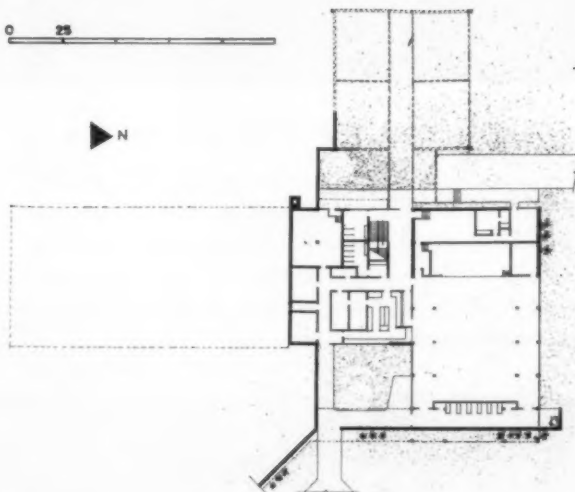
Charles E. Pearson

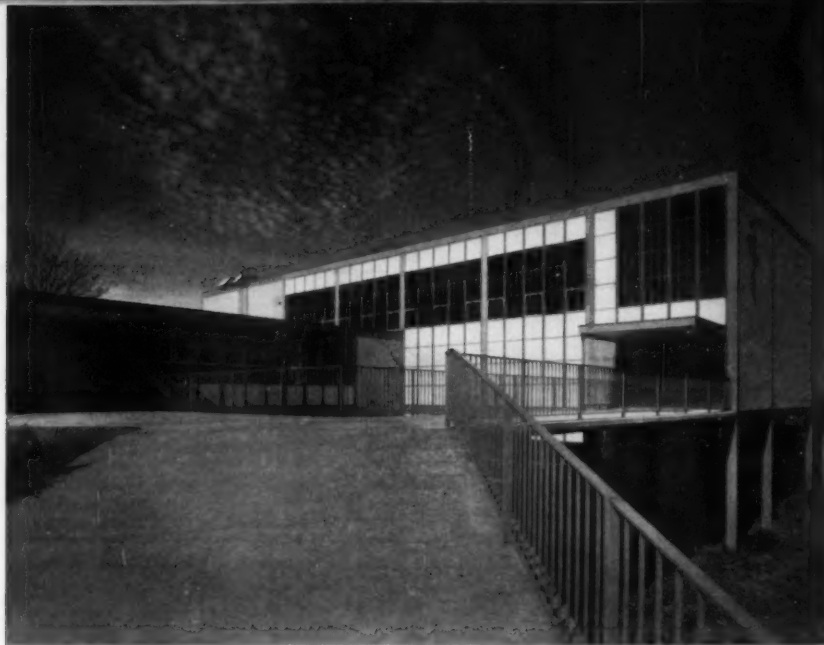




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SEATTLE PAROCHIAL SCHOOL

Conservative in method — witness the carefully aligned classroom desks — this school yet contains many of the practical devices and types of equipment developed for schools in recent years. The double-loaded classroom corridor is skylighted; clerestories provide bilateral light for the eight classrooms; tack space, cabinets and efficient wardrobe units are provided. A rear exit from the classroom wing gives access to large parking and play areas.

Charles R. Pearson



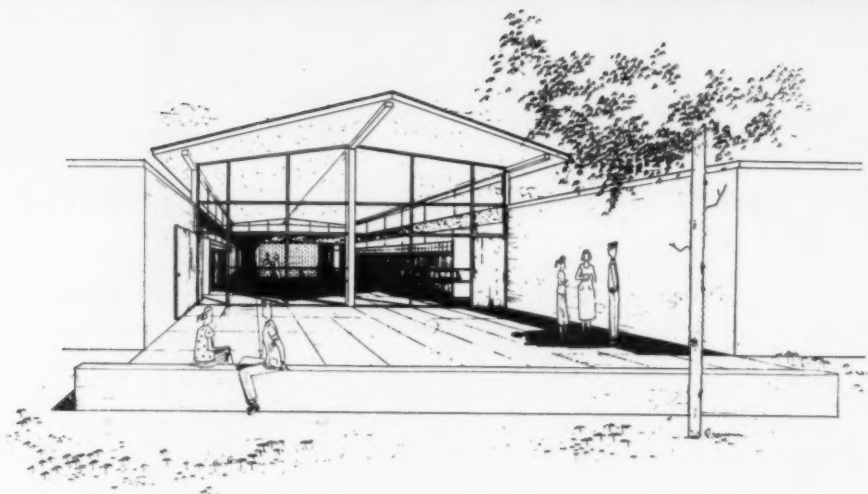
FLEXIBLE DESIGN FOR NEW DISTRICT

Parkway Junior High School, Creve Coeur, Mo. Hellmuth, Obata & Kassabaum, Architects; Engelhardt, Engelhardt, Leggett & Cornell, Educational Consultants. This school, now under construction for the newly consolidated Parkway District, is the result of the concerted work of many people. The locale is the St. Louis suburbs, which have recently grown explosively. In 1953, three districts formed a Citizens' Study Group which, assisted by professional educational consultants, painstakingly studied the area's needs. One result was consolidation for, in part, the purpose of providing a sound basis for starting a secondary school system. Another was so thorough a public comprehension of their problems that an exceptionally close rapport still exists between lay citizens, educators and architects. Still another was a set of objectives so clear that a definite program could be developed and an archi-



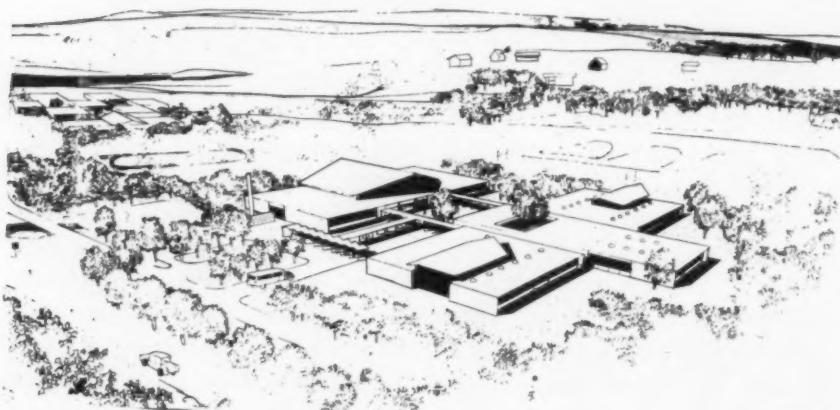
Final Design

tectural competition held, open to all architects in metropolitan St. Louis. Buford L. Pickens, A.I.A., was professional adviser; William W. Caudill, F.A.I.A., Charles R. Colbert, A.I.A., and George D. Engelhardt of the Missouri Department of Education composed the jury. In accordance with the study group's findings, the site selected contained 102 acres, and the competition required its full development to include a senior and a junior high; first prize was the contract for the junior high which would for the present house grades 10-11-12 as well. Among the general considerations which characterized the program were a desire for great flexibility; determination to provide a school designed specifically for the transitional age of the junior high pupil; a wish to avoid rigid departmentalization; provision for non-academic subjects; appropriate emphasis on the social aspects of school life and on full community use.

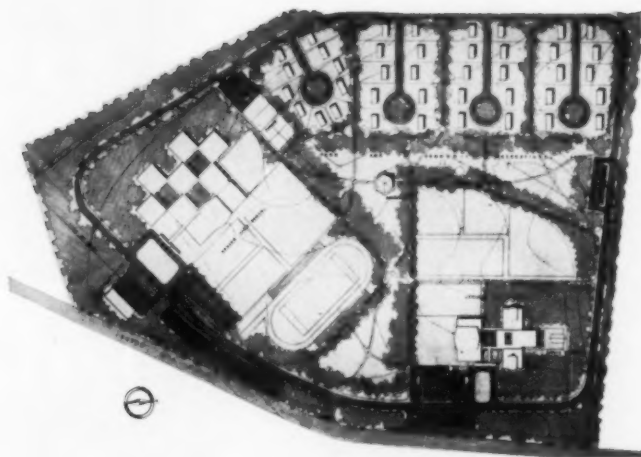
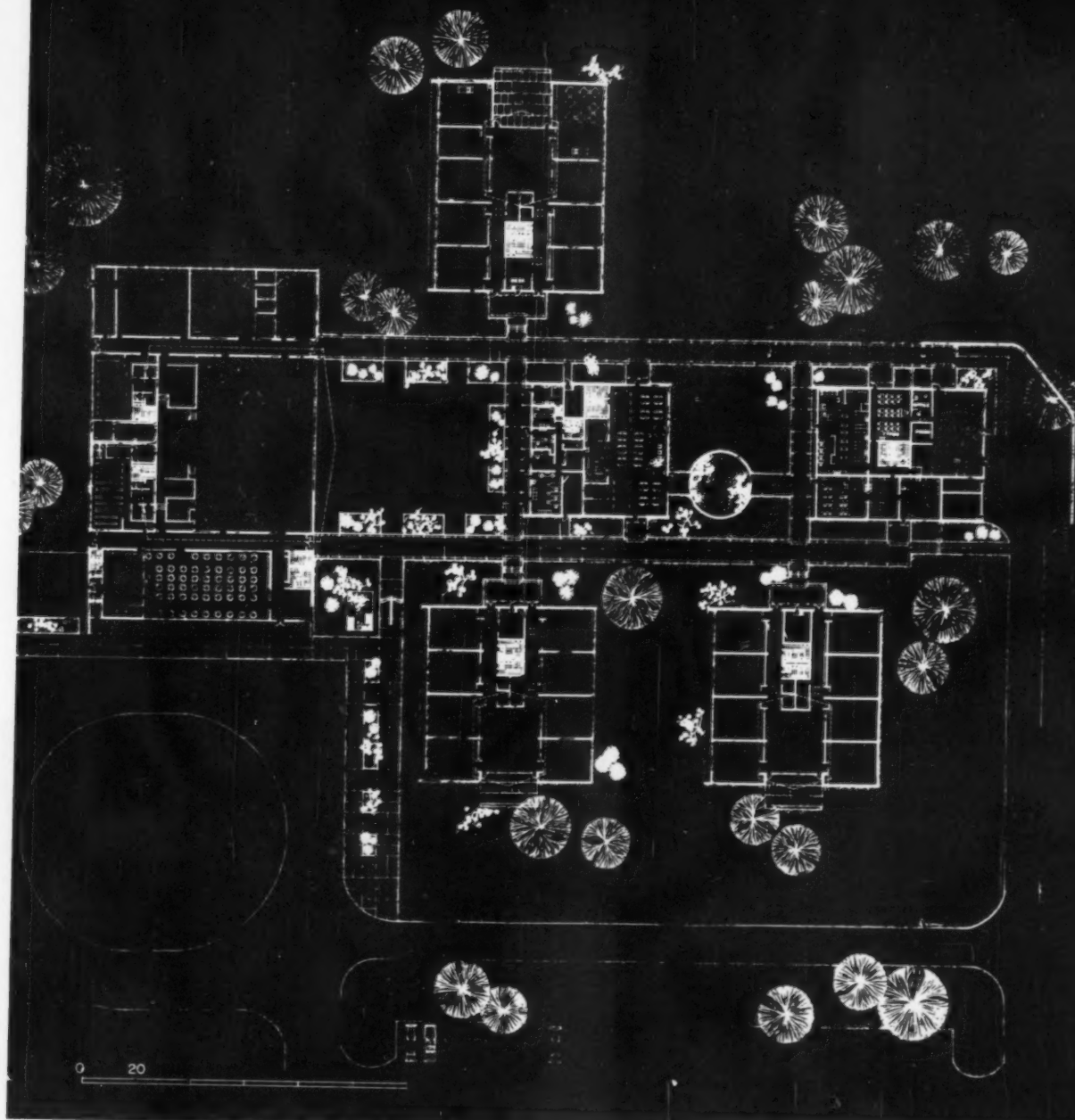


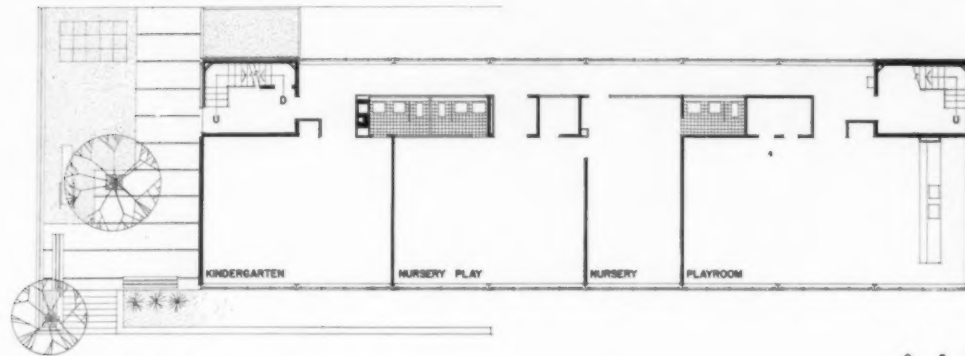
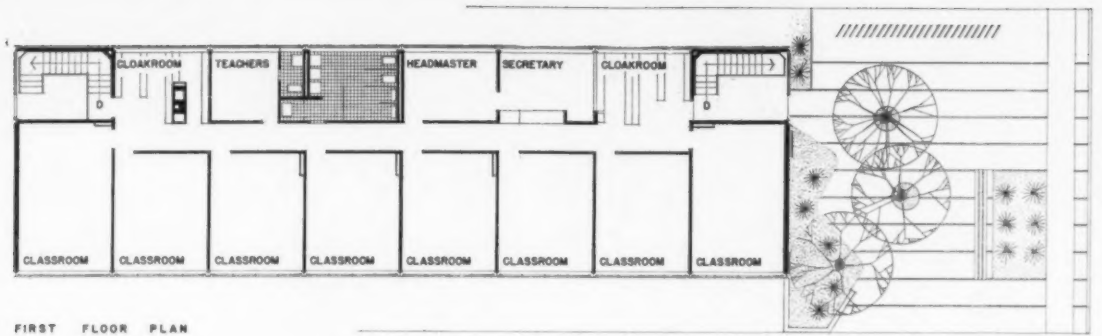
MISSOURI JUNIOR HIGH SCHOOL

To Robert D. Snyder, Parkway Superintendent, is due much credit for this undertaking. He has stated that Parkway has all the customary financial problems of expanding school districts; that economy was a necessity but that the true economy of making certain the school would serve well for many years was elected rather than the cheapest possible enclosure of space. Simple construction and materials, ease of maintenance and durability, and flexible design were insisted upon. The design, modified as indicated below, includes three "schools within a school," each containing a large central space or general education laboratory. Two of these are for the present junior high, one for a senior high (which will eventually have its own plant); the three other units will house non-academic subjects; administration and library; and gymnasium, cafeteria and music rooms. With inclusion of senior high facilities, the cost has been increased from the \$600,000 envisioned at the time of the competition to \$986,000. The school will accommodate 600 pupils, 200 in each of the three "little schools." Construction is to be wall-bearing concrete block with steel framing for the raised roof and long-span areas. Exteriors will be brick, glass and sprayed concrete. Interiors will be painted block, with a plastic finish in kitchen, toilets and locker rooms. Each unit will have its own oil burner supplying forced warm air through under-floor ducts with peripheral ventilation and individual room controls. Lighting will be fluorescent.



Competition design

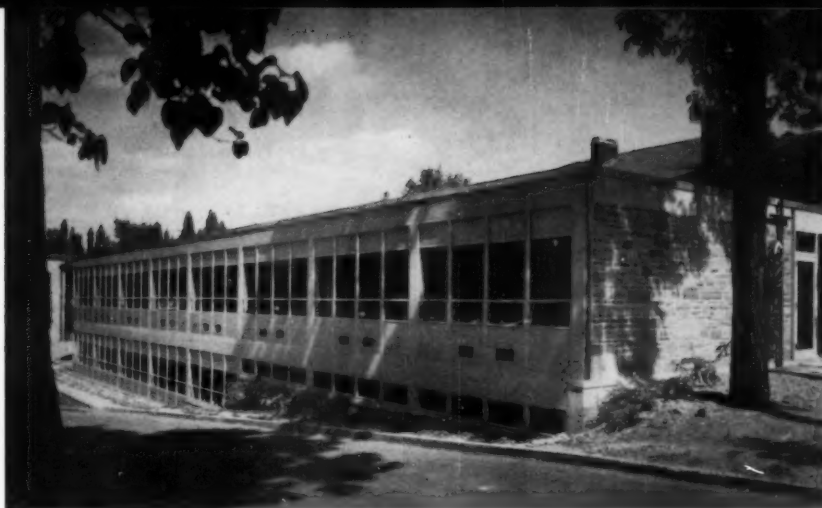




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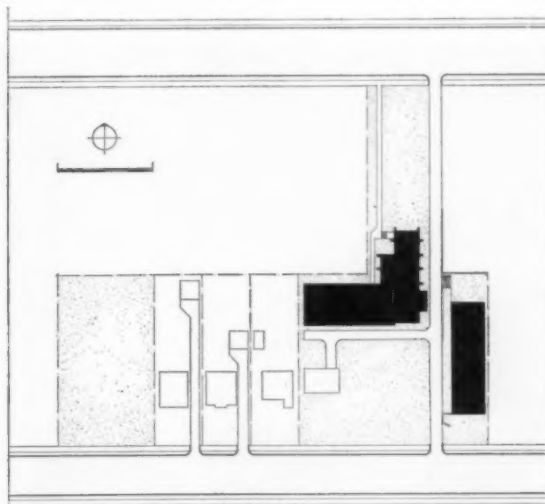
Joseph W. Molitor





NONSECTARIAN SCHOOL FOR BOYS

St. Edmunds' School, Episcopal Diocese of Pittsburgh, Pa. John Pekruhn, Architect. Formerly known as Ascension Academy, this young school was founded in 1947 by Bishop Campbell, then rector of the Church of the Ascension. So vigorous was the school that it soon outgrew its original location and spread into temporary quarters in the Redeemer parish house, with the nursery and kindergarten housed in the present Calvary Church rectory. This was in 1951. Then and in the next two years much happened. A new headmaster was named; a donor, Mrs. Edmund W. Mudge, gave the school land adjoining the Church of the Redeemer; the architect was commissioned and a building fund campaign was launched; the school was approved as an organization of the Diocese; and, following naturally from the fact that the board of trustees of this nonsectarian school is interdenominational, it was decided to adopt a name independent of any Pittsburgh church. St. Edmunds' was the name selected because it recalled the man in whose memory the land was given and because the young king of East Anglia, martyred because he would not compromise (portrayed in the contemporary sculpture by Eliza Miller), was considered an appropriate patron saint of boys.



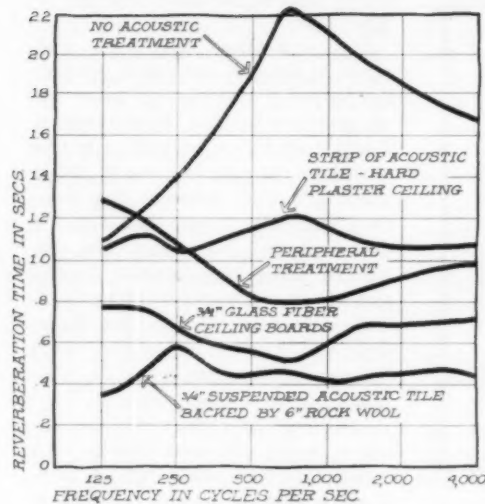


NONSECTARIAN BOYS' SCHOOL

One of the virtues of schools of this type is, usually, the small size of classes and the consequent close relationship between teacher and students. Above, classroom and kindergarten room; below, library.

Joseph W. Molitor





New School Designs Bring Along Noise Problems

By R. N. LANE, Boner & Lane, Consultants in Acoustics, Austin, Texas

This article in expanded form is appearing concurrently in *Noise Control*

Noise problems in schools have been accentuated because of changing school design concepts. School construction is lighter (sound can penetrate walls more easily); there is considerable emphasis on "open planning" (eliminates barriers for stopping sound); natural ventilation has become more prevalent (makes way for cross transmission of sound and admission of outdoor noises); and the wide range of school activities brings up more special problems (audio-visual rooms, music practice rooms, etc.) Fortunately there are acoustical techniques available which can mitigate these problems while still preserving the intent of these new design features.

THERE ARE CERTAIN STEPS to be taken with any school to minimize noise. The first of these is to select a site as remote as possible from noise sources. If this can't be done, at least classrooms and administrative areas can be buffered by other buildings such as shops which can be closer to the noise. The next step is to have interior spaces sufficiently quiet and to prevent excessive sound transmission between rooms. This is the primary concern of the following article.

Open Classrooms

Consider the noise problems within

the classroom first. The noise to be controlled is generated in the classroom itself by the teachers and the students. The noise level inside the room is, of course, a function of the amount of acoustical absorption in the room and the amount and type of activity. The Acoustical Materials Association has sponsored a study by our firm of the various acoustical conditions prevailing in classrooms in several schools over the country and part of these data are shown in the chart above. Noise level within a room will vary directly with the reverberation time. Notice that there is a spread in reverberation time from about 0.4 second to about 1.2 seconds for all the acoustically treated rooms, and our tentative findings were that the teachers in these classrooms were satisfied with the interior acoustics of the rooms or at least had not complained that the rooms were too noisy or too live. These data are for standard size classrooms approximately 24 ft wide, 30 to 35 ft long, with a 9 ft ceiling.

Our preliminary recommendation is that the amount of absorption is not critical so long as the reverberation time for the empty room is below one second and preferably around 0.8 second throughout the frequency band.

From these acoustical studies in the schools, it was found that a much more serious consideration from a noise standpoint was the lack of noise control between classrooms. Many times the lack of noise control is caused by poor wall construction; however, as often it results from efforts to achieve the best natural ventilation possible (especially in the warmer climates) without sufficient money being budgeted for attendant sound control.

We found that classroom walls of most new construction does not come very close to the commonly recommended value of 35 to 40 db. To substantiate these observations, we decided to measure the noise reduction achieved in twenty schools and question the faculties as to the suitability of their classroom environments (study also sponsored by the Acoustical Materials Association).

One school in which conceivably there could be a noise problem due to the interior arrangement is shown in the sketch above. Notice that there are no side walls whatsoever; therefore, the only acoustic isolation between rooms is the heavily treated ceiling and the partial barrier partition between each classroom. The space divider which serves in

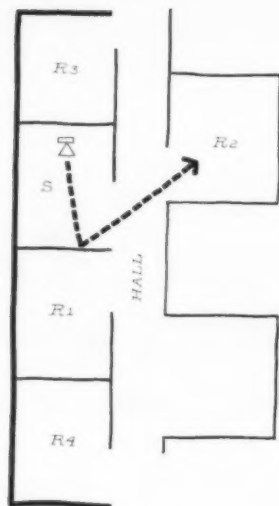


Figure 1

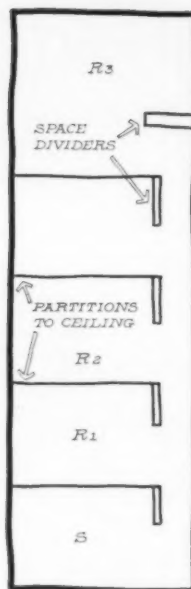


Figure 2

Open planning brings with it inherent noise problems, but some ways are better than others to minimize distraction. Figure 1: Sound from room "S" hits a partition and bounces across the hall into "R₂"; average N.R. (noise reduction) is only 11.5 db between the two. The arrangement in Figure 2 gives 15 db between room "S" and "R₁" which, while far from ideal, did not seem to cause annoyance

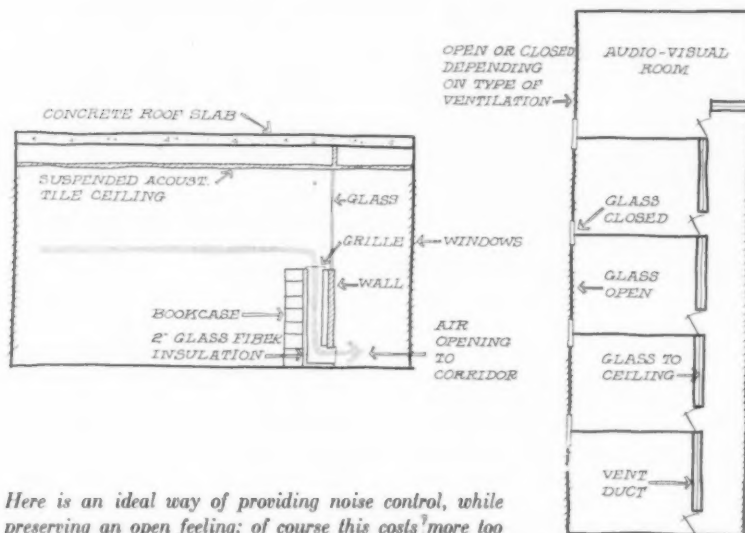


Figure 3

Here is an ideal way of providing noise control, while preserving an open feeling; of course this costs more too

place of the corridor wall extends only halfway to the ceiling and only a few feet from the dividing wall. Only 15 db noise reduction is obtained between adjacent rooms.

Actually, this school seems to be designed as well as could be expected from an acoustical standpoint if an open plan is wanted. (See Figure 2.) We made measurements in one other open plan school in which the noise reduction between classrooms was much less. The reason for the lesser noise reduction

between rooms in the second school (Figure 1) is twofold; first, the latter school is not heavily treated with acoustical material and sound propagates down the hall more readily; and second, the sound is actually reflected directly into classrooms across the hall from each other. For example, sound emanating in the source rooms are reflected from the partition between the source room and the room labeled "R-1" and propagate directly into "R-2" which is across the hall. Also, the hall is wide and

all its surfaces are glass, concrete or hard plaster.

Various architects have asked what might be done acoustically to preserve the feeling of openness and space and yet provide a measure of noise control. Figure 3 shows one possibility. In this scheme an attempt is made to obtain about 12 to 15 db reduction from classroom to corridor through the ventilating duct built into the divider. Also, the corridor ceiling is acoustically treated and will act as a sound-absorbing chamber rather than a sound propagation duct and thereby reduce the sound transmission down the hall to the adjacent classroom. The ceilings of the rooms are also fully treated with acoustic tile to reduce the noise level in each room, and the combination of these three treatments should, we believe, provide about 25 to 38 db noise reduction between classrooms. These measures do add to the expense of the building; therefore, it is doubtful that they will be installed until the teachers demand more acoustic privacy than is presently afforded them.

Cross-Ventilation

Figure 4 illustrates the type of noise problem one encounters in the more customary double-loaded corridor schools where the ventilation is through the classroom wing from the window side, through the hall, into the opposite classrooms. For normal conditions, with the windows and transoms in the corridor wall open, only 14 decibels noise reduction is obtained between the source room and opposite room "R-2" which is across the hall. This noise reduction could have been greatly improved upon in this particular case if a very absorbent ceiling had been used in both classrooms and corridor instead of hard plaster. As a result of the hard plaster ceilings, the sound propagated very well along the ceiling, through the transoms and into the opposite room. When the windows and transoms are closed, which could be only a few days a year for this Texas school, a respectable average noise reduction of 31 to 32 db is achieved between the various classrooms.

Figure 5 shows another double-loaded corridor classroom wing in which the ceiling of both rooms and corridor was heavily treated with acoustic tile. The noise reduction in rooms across the hall from each other and with the corridor transoms open is up to a reasonably good 26 db average. Rooms adjacent to each other have gone up to 19 db aver-

age and would have been even better had it not been for the fact that the common wall between the two adjacent classrooms did not go to the floor slab or roof—they simply went up to a suspended acoustic tile ceiling and therefore there was considerable sound transmission over the wall to the adjacent room.

The solution to the noise transmission problem between adjacent rooms is well known and it is to continue the 30 to 35 db common walls all the way to the ceiling. The problem of noise transmission from the classroom to the hall has not generally been recognized, or if it has, it has been ignored. One suggestion for a partial solution to the problem is shown in Figure 6. The main objection to the sound absorbing baffles placed over each opening above and below the hall lockers is their cost, and this suggestion may meet with some resistance on this count.

In our field studies noise reduction measurements were also taken where efforts were made to provide ventilation with some measure of noise control. Figure 7 shows classrooms which had a ventilating duct separating them. In this case jalousie windows are open to the prevailing wind on one side, the air passes through the ventilating duct into the classroom, and then outside through another set of jalousie windows. The measurements showed that 23 db isolation was obtained between the rooms back to back separated by the duct, but only 19 db was obtained for rooms adjacent on the same side of the duct with their windows open. With the big jalousie windows closed, this attenuation was increased to 25 db. This entire arrangement could have been improved considerably if separators had been put in the ventilating ducts so that the adjacent rooms, S and R₁, were not interconnected to each other and if the duct between S and R₁ had been lined with a sufficient thickness of material. In this particular case the duct lining consisted of 3/4-inch thick glass fiber duct liner with the tarred side exposed instead of the soft side, and so was not very effective. However, it should be noted again that with the 23 db noise reduction between the rooms, there have been no teacher complaints whatsoever even though the teachers' desks were located back to back.

In Figures 10 and 11, two other types of ducts are shown; the duct in Figure 10 is a ventilating duct above a corridor on a double-loaded corridor wing and again the lining of this duct was com-

pletely inadequate and consisted of 1/2-in. perforated acoustic tile. The average attenuation between these two rooms shown in Figure 9 was 23 db. However, for teachers standing directly under the duct and facing each other the attenuation was down possibly to 18 db at the mouth of the duct and considerable complaint has been registered. When a new wing of the school building was to be built, the architect asked for improvements in the original system. The duct in Figure 11 was designed and installed between classrooms which were back to back without a corridor in between.

In the new classroom wing the average attenuation between classrooms was 26 db, and this improvement was such that the faculty considered the noise reduction completely satisfactory. Why should 3 db difference in the average attenuation cause such a different teacher reaction? In this case it is thought that the difference is the result of the greater attenuation of sound at the higher frequencies (from 600 cps up)

which if too prominent make speech much less intelligible.

Throughout our measurements it was found that there were very few faculty complaints if the noise reduction between classrooms amounted to 26 db or more.

Summing up, we would recommend that no classrooms have less than 25 to 30 db noise reduction between them if at all possible. If there is to be a common ventilating duct, then there is no necessity for building a wall which has a transmission loss of more than 20 to 25 db. Of course, in corridorless schools the noise reduction is even less, and simple, single-thickness plywood partitions or glass will suffice.

Problems With Other Rooms

Another room which has come into general use in modern schools is the "cafetorium." Experience has shown that the design of these particular rooms is usually based more upon cafeteria requirements than upon auditorium requirements. The rooms, therefore, should

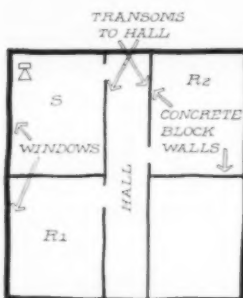


Figure 4



Figure 5

Openings for natural ventilation, without provision for acoustical control can cause poor noise reduction. In Figure 4, where all room surfaces are hard, the N.R. between rooms "S" and "R₁" is 14 db with windows and transoms open. Figure 5 is much better with an average of 19 db between "S" and "R₁"; it also has a glass fiber ceiling. Figure 6 shows recommendation for cross ventilation

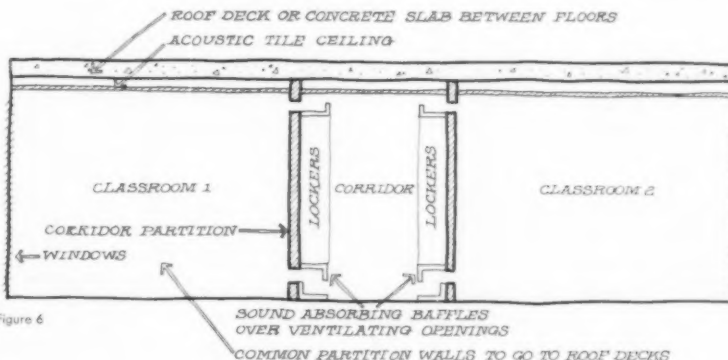


Figure 6

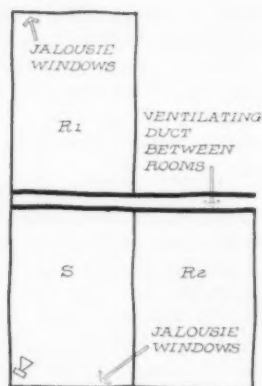


Figure 7

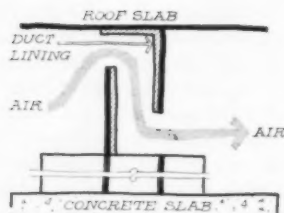


Figure 9

When classrooms are back to back, common ventilation ducts are often used. The situation in Figures 7 and 8 will suffice if the duct is lined sufficiently with insulation. The situation in Figure 10 was inadequate when lined only with acoustical tile (jagged line is grille). Improvement is shown in Figure 11

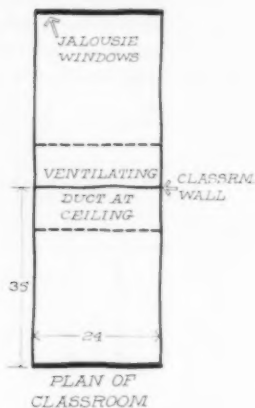


Figure 10

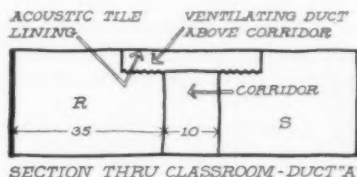


Figure 11

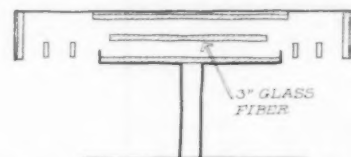


Figure 12

WALL STRUCTURES FOR MUSIC TEACHING STUDIOS

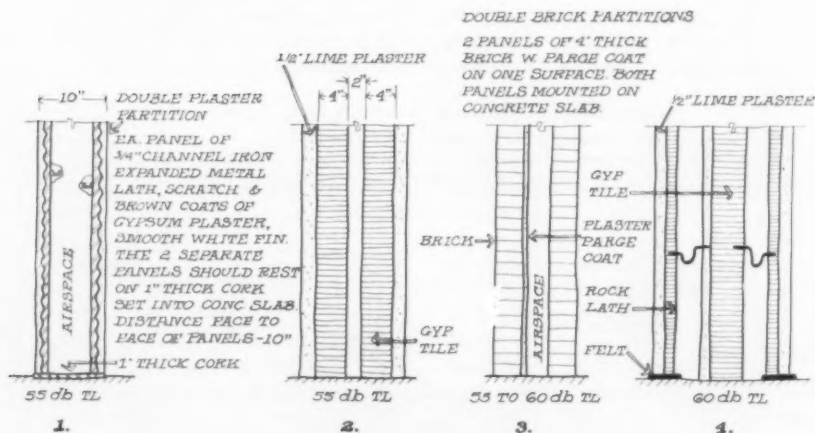


Figure 13

be treated primarily as a problem in noise control. It is recommended that as much absorptive material be used in a cafeteria as possible so that the clatter of the dishes will be somewhat reduced and the conversation will not get acoustically overpowering. Since cafeterias invariably have low ceilings and improper layout for a good auditorium, it is impossible to treat the room for a good hearing. A sound amplifier is recommended for speech distribution.

The next room in which noise can be quite a problem is the gymnasium. It can be effectively treated at minimum cost first of all by using an exposed, acoustically absorbent roof decking, thereby providing an entire ceiling with a noise coefficient of 0.8 or more. This type of roof combined with concrete block walls having the rough face exposed will give an acoustically satisfactory and economical gymnasium.

The music department also comes in for its share of problems. If the band room cannot be in a separate structure, then special attention to sound reduction of walls is required. If the choral room and the rest of the music department are located in the same wing, it will be necessary to provide good isolation between these two rooms; as a matter of fact, a minimum of 55 db noise reduction should be provided for any room adjacent to the band room, with possibly the exception of a machine shop or manual arts room. Several satisfactory wall constructions for 55 db are shown in Figure 12 and may be used interchangeably, depending on cost. If the choral room is located next to the band room, as in many music departments, it would be even better to provide 60 to 65 db attenuation and this may be accomplished rather economically by putting a row of practice rooms or storage rooms between the band room and the choral room. The interior acoustics of the choral room are quite critical and the wall finishes should be selected to provide a uniform response with frequency in this room and have a reverberation time of about 0.7 to 0.9 second. We can state this with reasonable assurance as most schools allocate about the same size rooms for choral rooms. The interior acoustics of the band room, however, are not critical except that, in our opinion, the room should be as dead as possible. The control of low frequencies are particularly important. We have found that if a considerable amount of exposed porous concrete block masonry can be used, it will effectively absorb the low frequencies.



PRECAST SHELLS STACKED TO CUT COSTS

ALTHOUGH THEY MAY AT FIRST GLANCE look like oversized slabs of strudel, the striated mounds pictured above are the product of a Latin-American recipe for low cost thin shell construction. Working with barrel roof shells supported on precast walls and columns, Colombian architect Alvaro Ortega, currently teaching at Harvard's Graduate School of Design, has developed a method of casting curved concrete sections on the ground in stacks of as many as forty — one atop the other — so that all the shells required for a structure can in most cases be cast from a single form. Columns and walls are also cast on the ground, with the wall sections stacked in the same way as the shells.

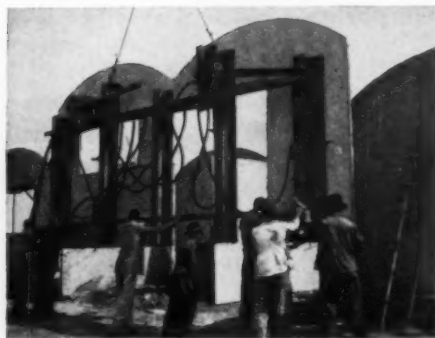
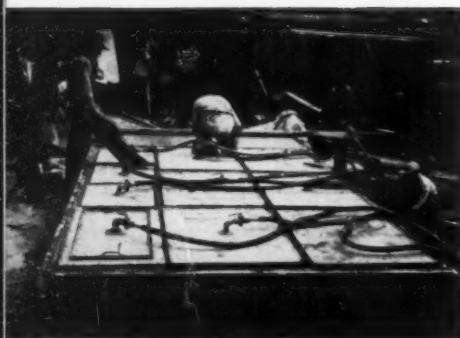
Ortega, who has tested his system on projects ranging from a 600 unit housing development to a chicle processing factory, believes that this reduction in formwork may cut total construction costs by as much as 35 or 40 per cent. Additional savings result from the speed with which such a building may be erected. As Ortega points out, work proceeds on the roof and foundations simultaneously — and once the supports are in position, the shells can be placed very rapidly.

Perhaps as essential to this type of construction as

the concrete mixer is the vacuum equipment that is used not only in lifting the precast elements, but in forming them as well. As each shell or wall section is poured, it is covered with pads connected by hoses to a vacuum pump which draws out the uncombined water in the concrete. Within half an hour, the newly-poured surface, though still moist, is strong enough to support the wet concrete of the next shell. To prevent bonding between the stacked layers and to give a smooth undersurface, each shell or wall is coated with paper or lime paint before the next element is poured. Using this vacuum drying system, it is possible to cast eight layers per day in each stack. And, because each layer is sealed top and bottom, the stack becomes a ready-made curing room in which moisture and temperature are kept uniform until the concrete reaches full strength.

The shells are usually poured over a curved wooden form in thicknesses of $1\frac{1}{2}$ to 2 in., and reinforced by a mesh of $\frac{1}{4}$ in. bars on 8 in. centers, with additional diagonal reinforcing following the lines of principal stress. The thickness of wall sections varies from 3 in. for houses to $3\frac{1}{2}$ in. for factories or warehouses. Both

Roof shells and wall sections are cast in layers on the ground, each acting as a form for the one above. Because formwork is kept to a minimum, construction costs may be reduced by as much as 40 per cent.



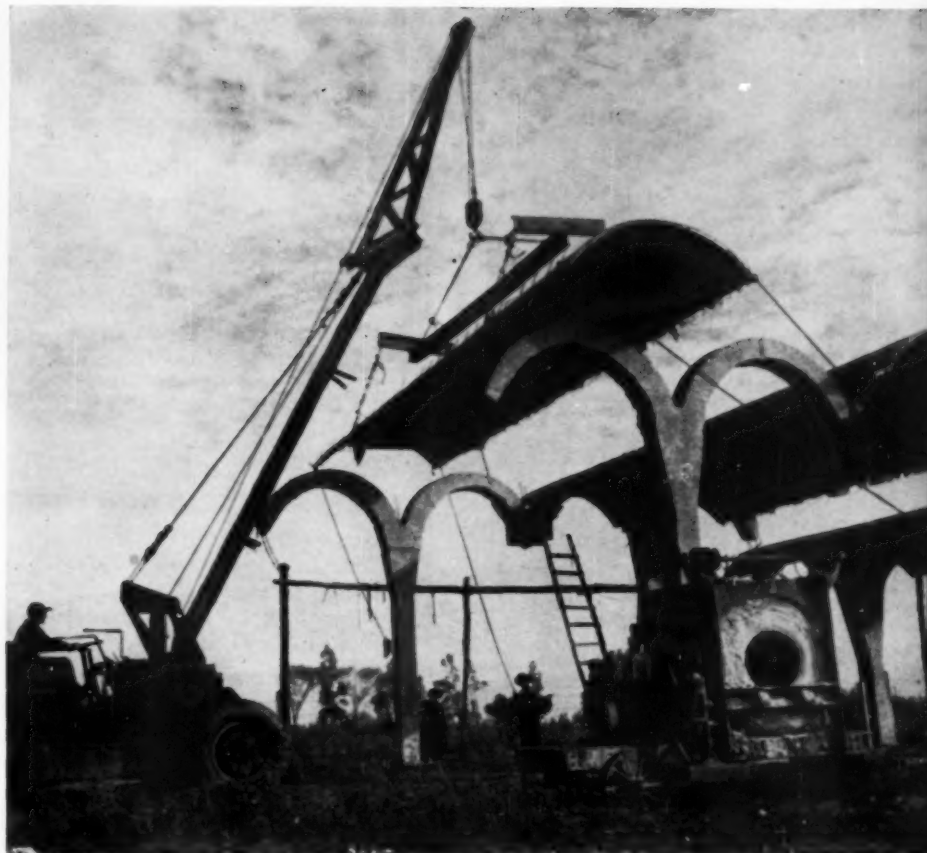
Vacuum equipment "pre-dries" each layer of concrete before the next is poured (photo far left). Later the same equipment is attached to a crane and used to hoist the pre-cast elements into place.



are reinforced with $\frac{1}{4}$ in. bars spaced 14 in. on center. The wall sections are formed around the necessary openings for doors and windows; and, on at least one of the factory projects, Ortega provided built-in skylights by casting small sections of glass directly into the barrel vaulted shell roof.

When the precast elements are ready to be lifted into

position, the vacuum equipment goes into action again. A vacuum lifter with suction pads similar to those used in "pre-curing" the concrete is placed over the section to be lifted, and connected by a system of ropes and pulleys to the crane which finally strips the shell or wall from its stack and hoists it into position. Although the lifter is capable of handling sections of almost any



The thin concrete shells for this 600 unit housing project in Bogota, Colombia, were cast at the rate of eight per stack per day. Using the vacuum lifting process, 20 or 25 shells were placed daily.

size, the maximum dimensions practical for the shells and walls are determined to some extent by the capacity of the crane. For the projects shown here, an 8-ton crane was used, limiting the shells for the factory roofs to a length of about 40 ft and widths of 9 to 12 ft. Wall sections for the houses are 22 ft long by 9 ft high; those for the factories are 20 ft high and 11 ft wide.

The upper sections of both walls and columns are cast to conform with the curvature of the shells they support. Because the shells can then act as simply supported beams rather than as arches, tie rods are unnecessary, and placing is easier and faster. Two types of supporting capitals are used with the columns, depending on the desired spacing between bays. When



Openings for doors and windows — and even glazed skylights as in the shell at right — are formed into the elements as they are cast. To eliminate tie rods and speed erection, column capitals and upper wall sections follow the curvature of the shells they support.



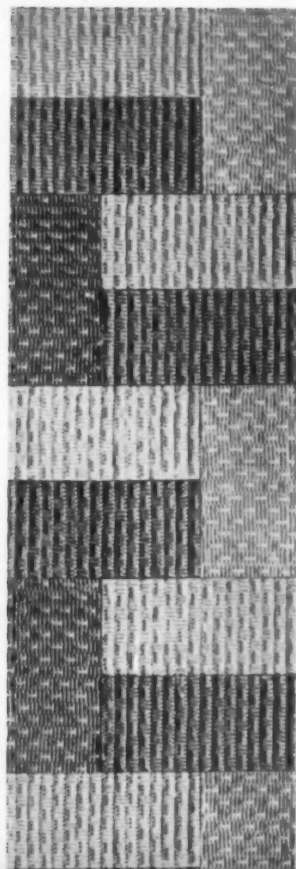
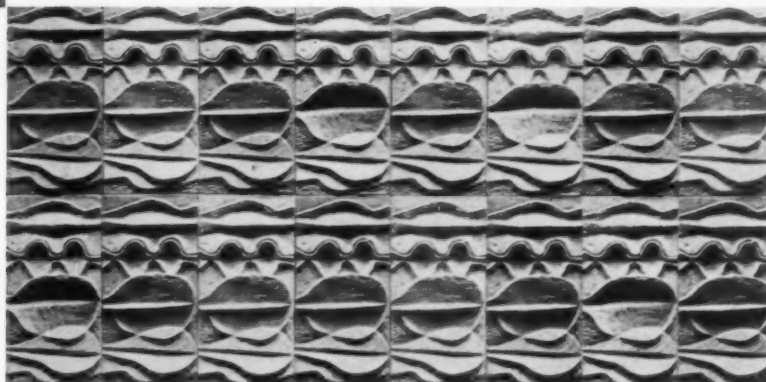
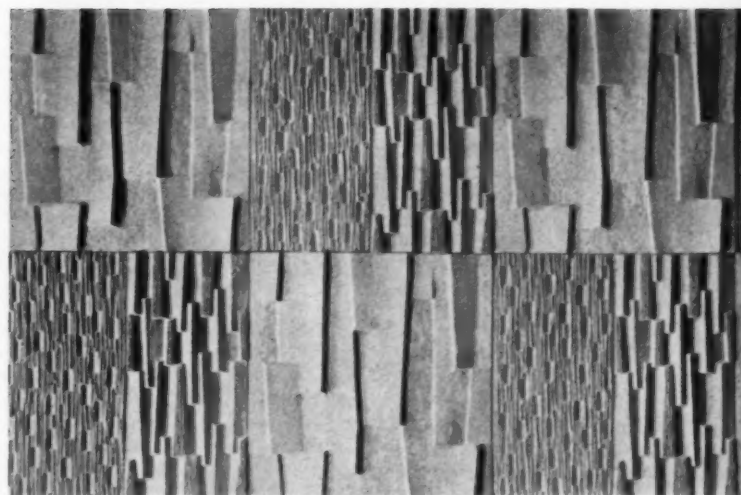
bay spacing need not exceed the combined width of two barrel shells, the columns are formed with radiating arches which support a shell on each side of the column; if more than two shells are needed to roof a bay, adjacent columns are spanned by a beam which is "scallop" with arch sections that support as many shells as are required.

In forming the elements, allowance is made for a one or two inch cast-in-place joint and the reinforcing is placed so as to extend several inches beyond the edge of the concrete. When all the sections are in place, they are connected by simply overlapping the reinforcing (or welding it) and filling the joint with concrete.

(More Roundup on page 234)

PRODUCT REPORTS

Materials • Equipment • Furnishings • Services



CERAMIC FACINGS ADD COLOR, TEXTURE TO WALLS

DESIGN-TECHNICS ARE CERAMIC TILES — but with a difference. They are also raw materials from which the architect can fashion an almost limitless variety of sculptured ceramic wall surfaces. Colors range from the subtle earth tones of unglazed natural clays in buff, tan, taupe gray, black or terra cotta to the brilliance of more than thirty matte or glossy glazes, while the patterns run a gamut from bold relief sculpture to quiet texture. The flexibility of the material stems not only from this wide range of “standard” designs and colors, but also from the myriad possibilities for combining them into integrated three-dimensional wall treatments. And to aid

the architect in visualizing a completed wall surface, Design-Technics presents for his approval a “blueprint” pasted up from photostats of the component patterns, scaled at $1\frac{1}{2}$ inches to the foot and tinted with a water color wash.

Waterproof and weather resistant, the wall surfacing requires no maintenance, and the tiles can easily be set in place with a contact adhesive on exterior or interior walls of stone, wood or masonry. Tile sizes are $4\frac{1}{4}$ by $8\frac{1}{2}$, 6 by 12, 12 by 12 and 18 by 18 inches, with wholesale prices ranging from \$3.60 to \$6.25 per square foot for most patterns. *Design-Technics, 4 East 52nd Street, New York, N. Y.* (More Products on page 260)

HOUSE ANCHORAGES: 1-Introduction

By ALBERT G. H. DIETZ*

SCOPE OF STUDY

Whether or not anchorage is necessary for small buildings, particularly houses, has long been open to question. Faced with this problem, the Federal Housing Administration asked the Building Research Advisory Board to study the problem and make recommendations. The Building Research Advisory Board consequently asked a group of individuals from various parts of the building industry to consider this problem and to report its findings and recommendations.

It was evident that there is no hard and fast answer applicable to all parts of the country. The forces to be resisted vary, the types of construction vary and, consequently, the likelihood of forces large enough to cause overturning or displacement of the house from its foundation varies in different parts of the country. In some instances, anchorage is needed; in others, it is unnecessary. An analysis must be made to determine whether anchorage is or is not required.

* Professor of Building Engineering and Construction, Massachusetts Institute of Technology, Cambridge, Mass., and Chairman, BRAB Special Advisory Committee, for the study, "The Anchorage of Exterior Frame Walls to Various Types of Foundations," conducted by the National Academy of Sciences-National Research Council at the request of the Federal Housing Administration, 1955-56.

It was decided that it is possible to design anchorages for (1) wind, (2) earth pressure and (3) earthquakes. On the other hand, tornadoes are disasters and structures in their direct paths are subjected to forces too great to be resisted by economical residential construction. The best that can be done is to design houses for normally expected high winds including hurricanes, but not for tornadoes. Similarly, floods are excluded from the study. Blast has been excluded also because too little is known about the areas where blast might be probable and important. If earthquake forces are severe enough a house will be destroyed, but if the forces are not great enough to destroy the house, it is possible to anchor it against displacement.

The committee recommended that research be carried on in a number of different fields. These recommendations for research include, in addition to the uncertainties surrounding floods and blast, a careful analysis of insurance and F.H.A. records to determine to what extent damage has actually occurred because of displacement of houses from their foundations. Certain insurance company records

showed no widespread damage but also revealed uncertainties in the records with respect to the degree to which damaged houses may or may not have been anchored, the degree to which anchored houses may have been saved from damage because they were anchored, and similar uncertainties. Furthermore, with the trend toward lighter construction, the probabilities of displacement due to wind and other forces are increasing. In addition, further research is recommended to determine the ability of different types of anchorage to withstand the forces imposed.

ANALYTICAL APPROACH

Wind

Wind is easily the most important of the natural forces to be resisted by a house and its anchorage.

The problem has been approached from two standpoints: (1) an analytical approach which would make possible fairly exact computations of wind forces and the resistance of a building to displacement, and (2) a quick approximate check by means of graphs to determine whether the more exact but more laborious analytical approach is

(Continued on page 227)

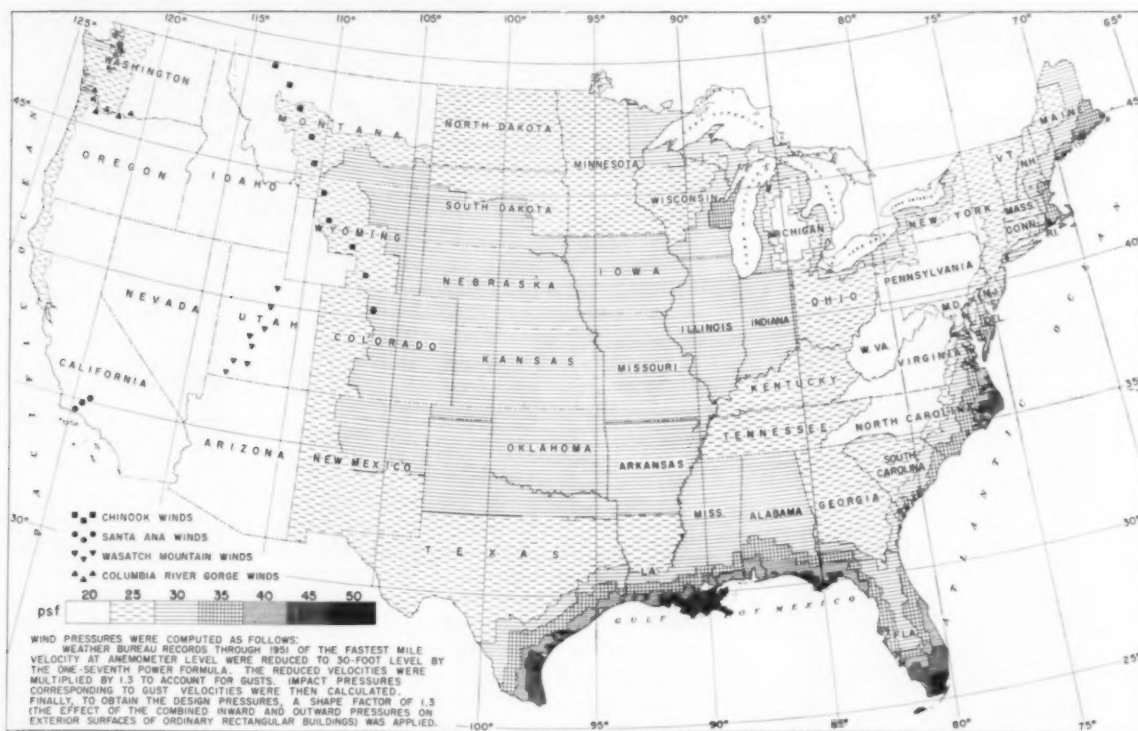


Fig. 1. To convert wind values shown on map to figures suitable for residential purposes,

use the following ratios (map value first):
20 = 15; 25 = 20; 30 = 25; 35 = 25;

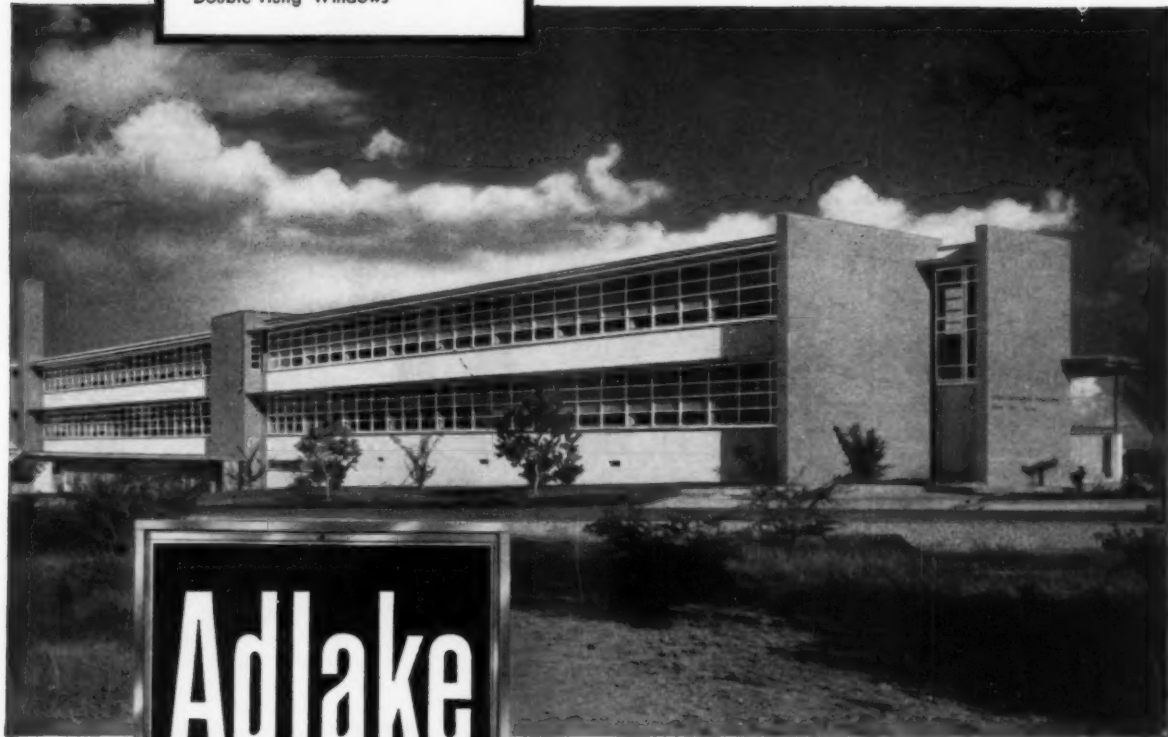
40 = 30; 45 = 35; 50 = 40. Reason is that map values are for 30 ft above ground

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ARCHITECT—Phelps, Dewees, & Simmons

CONTRACTOR—J. C. Worchester

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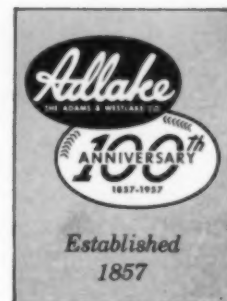
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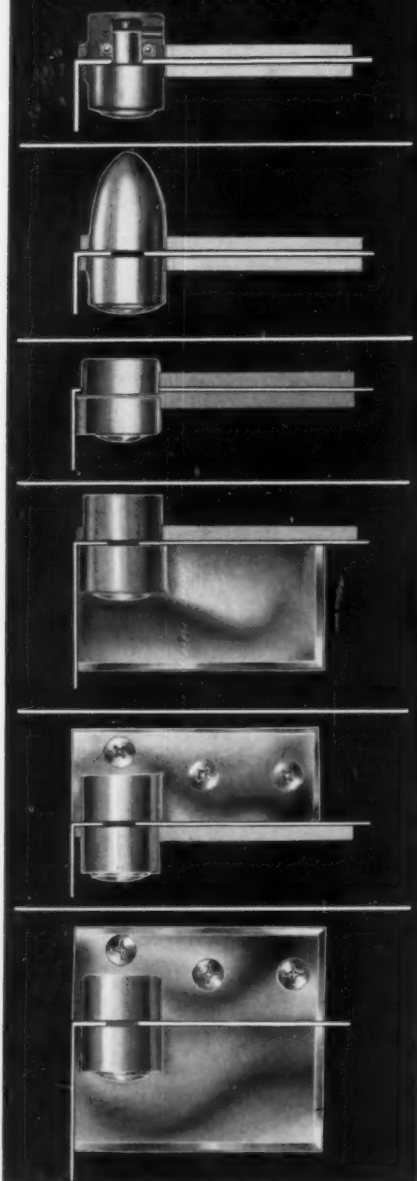
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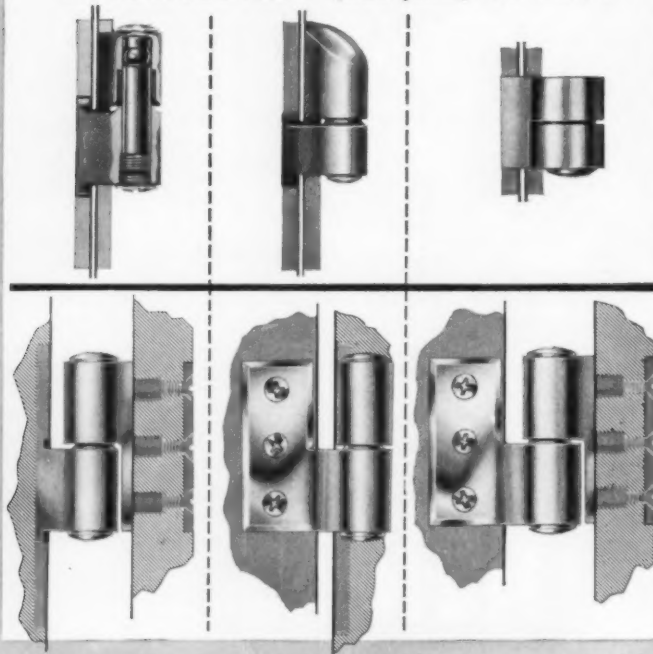
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HOUSE ANCHORAGES: 2-Methods of Calculation

By ALBERT G. H. DIETZ

necessary. The analytical approach is set forth first, and the more rapid graphical approach is then described.

The analytical approach to wind pressures is based upon the wind map (Figure 1) prepared for A.S.A. publication A-58.1-1955. It shows the expected wind pressures in various parts of the country in pounds per square foot against a surface oriented at right angles to the direction of the wind.

The design pressures shown on the map are for a basis 30-ft level and need to be modified for residential purposes where building heights are less than 30 ft. As a matter of interest, it may be noted that 30 lb per sq ft corresponds roughly to a 100-mile wind.

When a wind blows directly against the vertical wall of a house, the full wind pressure is applied. On the leeward side of a house, a negative pressure exists because of the partial vacuum developed which tends to force the leeward wall out in the same direction as the direction of the wind. Furthermore, a flat roof experiences an upward pressure and the same holds true of roofs of shallow pitch. Not until the pitch exceeds approximately 27 to 30 degrees does a positive pressure develop on a sloping roof. The leeward roof experiences a negative pressure or uplift at all times. Where overhanging eaves are encountered, strong uplift pressures can be expected. These are approximately double the design pressure on the windward side, that is to say, eaves on the windward side of a house experience strong upward pressure. Eaves on the leeward side experience negative pressure.

Design pressure coefficients for the various portions of a building are given in Table 1. It should be noted that the pressures on the leeward side are not only for negative pressure because of the flow of the wind around the house, but include an allowance for internal pressure on the leeward wall occasioned by doors and windows either being open or having been broken open by flying debris in a high wind. A sketch showing the types of forces and their directions is given in Figure 2.

Wind blowing against a house has three effects for which an anchorage analysis should be made. First, the house tends to rotate about the point where the bottom of the leeward wall meets the foundation. Secondly, the house tends to lift because of negative pressures or uplift forces developed on the roof. Third, the house tends to slide off the foundation because of horizontal forces. All of these forces are resisted by the weight of the house. As the house tends to rotate about the intersection of wall and foundation, an opposite rotating tendency is developed by the weight of the house, assumed to act

at its center of gravity. The uplift forces are resisted directly by the weight of the house. Horizontal motion of the house is resisted by friction developed by contact between the superstructure of the house and the foundation. The amount of friction is directly related to the weight of the house. If the house is heavy enough to resist all of these forces anchorage is unnecessary; otherwise, it should be used.

Analytical Method

The analysis can best be illustrated by taking an example as shown in Figure 2. The house is 30 feet wide, 40 feet long, one story high with sidewalls 8 feet high, and has a roof with a pitch of 4 in 12 or 18½ degrees.

All wind forces are assumed to be directed at right angles to the surfaces on which they are acting. Consequently, W_v and W_{lw} are horizontal and can be assumed concentrated 4 feet up on the windward and leeward

walls, respectively. These cause a rotating tendency or moment equal to $4 \times W_v$ and $4 \times W_{lw}$, respectively, about the point of rotation. Similarly, the forces acting on the various portions of the roof can be considered to be concentrated at the centers of the corresponding roof areas. Using the values for the various design pressure coefficients taken from Table 2, it is possible then to set up the computations in Table 3 for the various rotational effects or moments corresponding to the various wind forces.

Overturning

If the design wind pressure is known, it is possible to calculate the overturning effects or moments about the point of rotation. If, for example, the design wind pressure is 15 pounds per square foot, the various overturning effects are as given in Table 2 under the heading Moment for 15 psf. It is seen that the

TABLE 1—EXTERNAL AND INTERNAL DESIGN PRESSURE COEFFICIENTS

Roof Slope (degrees) Pitch	External & Internal	Design Pressure Coefficient				
		W_v	W_e	W_w	$W_{le} \& W_{li}$	W_{lw}
0°	E	1.0 P_w		-0.60 P_w	-0.60 P_w	
	I	-0.2 P_w		-0.45 P_w	-0.45 P_w	-0.45 P_w
	Total	0.8 P_w	-2.0 P_w	-1.05 P_w	-1.05 P_w	-0.45 P_w
9½° or 2/12 and 18½° or 4/12	E	1.0 P_w		-0.60 P_w	-0.45 P_w	
	I	-0.2 P		-0.45 P_w	-0.45 P_w	-0.45 P_w
	Total	0.8 P_w	-2.0 P_w	-1.05 P_w	-0.90 P_w	-0.45 P_w
22½° or 5/12	E	1.0 P_w		.06 × 22.5 - 1.8 = -0.45 P_w	-0.45 P_w	
	I	-0.2 P_w		-0.45 P_w	-0.45 P_w	-0.45 P_w
	Total	0.8 P_w	-2.0 P_w	-0.9 P_w	-0.90 P_w	-0.45 P_w
27° or 6/12	E	1.0 P_w		.06 × 27.0 - 1.8 = -0.18 P_w	-0.45 P_w	
	I	-0.2 P_w		-0.45 P_w	-0.45 P_w	-0.45 P_w
	Total	0.8 P_w	-2.0 P_w	-0.63 P_w	-0.90 P_w	-0.45 P_w
40° or 10/12	E	1.0 P_w		.015 × 40.0 - 0.45 = -0.15 P_w	-0.45 P_w	
	I	-0.2 P_w		-0.45 P_w	-0.45 P_w	-0.45 P_w
	Total	0.8 P_w	-2.0 P_w	-0.30 P_w	-0.90 P_w	-0.45 P_w

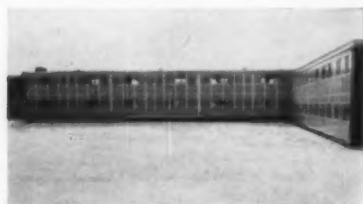
Note: W_v , W_e , W_w , W_l , and W_{lw} denote windward wall, windward eave, windward roof surface, leeward roof surface, and interior leeward wall, respectively. E denotes external pressure, and I denotes internal pressure. Positive values denote inward load; negative values, outward load except for W_{li} which represents the 20 percent loss due to openness. P_w denotes wind load per sq. ft.



Workmen installing window walls made with Hasko-Struct[†] plastic laminated sandwich panels. Architect is Manson & Carver Associates. General Contractor is Christman Company.

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YOU CAN DEPEND ON



HOUSE ANCHORAGES: 3-Methods of Calculation

By ALBERT G. H. DIETZ

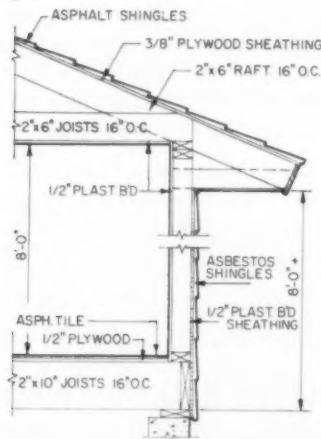
overturning effect is equal to 26,200 foot-pounds. This must be resisted by the weight of the building times its moment arm of 15 feet. The total weight of the house is 38,800 pounds exclusive of plumbing fixtures. If it is assumed that another thousand pounds approximately are involved in plumbing and other fixtures other than those which are found in the basement, the total weight of the house may be taken as roughly 40,000 pounds.* The resistance to overturn, consequently, is equal to 40,000 pounds times 15 feet, or 600,000 foot-pounds. If the customary safety factor of $\frac{3}{2}$ is employed, and the resisting moment of 600,000 foot-pounds is reduced to $\frac{2}{3}$ of that value, it is still 400,000 foot-pounds, or more than 15 times the overturning moment. No anchorage is needed for overturning.

Lift, Thrust

It is now necessary to check the house for uplift and for horizontal thrust. The computations for vertical force and for horizontal thrust are shown in Table 3. The vertical loads are the components in the vertical direction of the various wind forces on the walls and roof of the building. There is no vertical component on the walls but there are vertical components on the roof, as shown in Table 3. Similarly, the horizontal forces are the horizontal components of the forces on the walls and roof. Wall loads are all horizontal; roof loads have horizontal components, either directed to the left or to the right, as shown in Table 3. The walls are 40 feet long and the roof is 44 feet long. For a 15 pound per square foot wind load, consequently, the net upward load on the house is found to be

* No allowance for mechanical equipment was made in the committee report. It seems desirable to include it for the sake of completeness in this example.

Fig. 3



TYPICAL WALL SECTION

22,400 pounds. Similarly, the net horizontal force on the house is 4880 pounds directed to the left.

Because the house weighs 40,000 pounds and the uplift forces are only 22,400 pounds, there is a net downward force and anchorage against uplift is therefore unnecessary.

The net downward force of 17,600 pounds must be multiplied by a coefficient of friction to determine the resistance to horizontal motion. Major uncertainties exist with respect to the coefficient of friction but a commonly accepted value is $\frac{1}{2}$, that is, the resistance to horizontal motion is $\frac{1}{2} \times 17,600$ or 11,700 pounds. Because this exceeds the net horizontal wind force of 4880 pounds, no anchorage is necessary. Consequently, this house with 15 pounds per square foot wind loading does not need anchorage.

Many houses today are being built with slab-on-ground construction. This means that the superstructure of the house begins on a slab, there is no first floor which is an integral part of the frame and, therefore, the floor slab in an unanchored house does not assist in resisting overturning, uplift, or horizontal motion. Plumbing and heating equipment is customarily set directly on the slab and also makes no contribution to resisting wind forces. It is perhaps debatable whether partitions assist in resisting wind forces, but they are assumed in this example to be sufficiently well framed to the rest of the house to be effective. The weight of the same house that was used above but for slab-on-ground construction, is only 30,500 pounds. The resistance to overturning now becomes $15 \times 30,500$ or 455,000 foot-pounds. Taking two-thirds of this, there

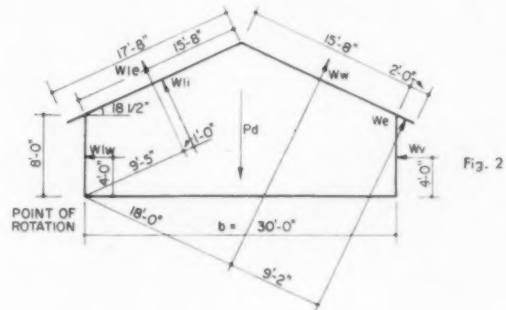


TABLE 2—MOMENTS OF FORCES

	Moment * per Foot of Length	Length ft	Moment for 15 psf ft.-lb
$M_v = W_v \times 8 \times 4$ $= .8 P_w \times 8 \times 4 =$	26 P_w	40	1,000
$M_e = W_e \times 27.2 \times 2$ $= 2 P_w \times 27.2 \times 2 =$	109 P_w	44	4,800
$M_w = W_w \times 15.8 \times 18$ $= 1.05 P_w \times 15.8 \times 18 =$	298 P_w	44	13,100
$M_{le} = W_{le} \times 17.8 \times 9.5$ $= .45 P_w \times 17.8 \times 9.5 =$	76 P_w	44	3,400
$M_{li} = W_{li} \times 15.8 \times 10.5$ $= .45 P_w \times 15.8 \times 10.5 =$	75 P_w	44	3,300
$M_{lw} = W_{lw} \times 8 \times 4$ $= .45 P_w \times 8 \times 4 =$	14 P_w	40	600
$M_w =$	598 P_w		26,200

* All moments are directed in a counterclockwise direction, tending to overturn the house about the point of rotation.

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HOUSE ANCHORAGES: 4-Methods of Calculation

By ALBERT G. H. DIETZ

is a net resistance to overturn of 305,000 foot-pounds which is still more than adequate to resist the overturning moment. The net downward force, however, becomes 30,500-22,400 or 8100 pounds. This still provides a net downward component resisting uplift. When it is multiplied by $\frac{1}{3}$ to find the resistance to horizontal loading, the horizontal resistance becomes 5400 pounds, which is slightly higher than the horizontal wind force of 4880 pounds. The house still qualifies as not needing anchorage.

Returning to the house with basement and framed first floor, if the wind load is increased to 40 pounds per square foot the overturning moment is $40/15 \times 26,200$ or 70,000 foot-pounds instead of 26,200 foot pounds. The net resisting moment of 400,000 foot-pounds is still more than adequate to offset, so anchorage against overturn is unnecessary. The upward force now, however, is $40/15 \times 22,400$ or 60,000 pounds, so that there is a net upward force of 20,000 pounds which requires anchorage against both uplifting and sliding. Similarly, if the house is considered to be of slab-on-ground construction, the net resisting moment of 305,000 foot-pounds is more than adequate to take care of the 70,000 foot-pound overturning moment, but there is now a net upward force of 29,500 pounds which requires anchorage against uplift. The horizontal force is $40/15 \times 4880$ or 13,000 pounds. It must be resisted by anchorage because friction cannot be counted

on when a net uplift exists.

Where anchorage is needed bolts, or their equivalent in terms of powder-driven fasteners; hammer-driven masonry nails; straps, clips and angles should be used. Anchor bolts $\frac{1}{2}$ -in. in dia. should be set at least 7 in. in solid concrete or 15 in. into concrete block, with the bolts not more than 8 feet on centers. This anchorage will be analyzed to determine if it resists forces in the example above. An important aspect is the size of the washer because the washer, in turn, bears against the wood sill and must be large enough to develop the necessary load against the side grain of the wood. If, for example, a 2-in. round washer with a $9/16$ in. round hole is chosen, the net area of the washer bearing against the side grain of the wood is 3.1 square inches. If the allowable side-grain stress is 360 psi (e.g., hemlock) and if this is multiplied by 1.33 to allow for the increased stress that can be taken during short-time loads such as winds, the allowable pressure against the washer is 480 psi. This times 3.10 gives an allowable uplift of 1500 pounds per bolt. Dividing the uplift force of 29,500 pounds by 1500 pounds indicates that 20 bolts are needed against uplift. If a bolt is placed one foot from each corner along each wall, as is customary, the rest of the bolts are spaced approximately 8 ft apart along the periphery of the house. In other words, the standard $\frac{1}{2}$ in. bolt 8 ft on centers will take care of the uplift condition on this house

provided 2-inch round washers are used. Furthermore, the weight of the footing and the slab tied into the footing must be sufficiently great to withstand the 29,500 pound uplift. A footing 10 in. deep and 12 in. wide, for example, weighs approximately 115 pounds per foot or 16,000 pounds, consequently, approximately 3 to 4 ft of a 3-in. thick slab would have to be tied in to the footing so that the weight of slab and footing together would be adequate to withstand the uplift force of 29,500 pounds.

The full horizontal force of 13,000 pounds must be resisted by the anchor bolts. For hemlock and similar species the allowable long-time load perpendicular to the grain against a half-inch bolt in material $1\frac{1}{2}$ in. thick is 320 pounds (National Design Specifications, National Lumber Manufacturers Association). This can be increased one-third for wind load and therefore becomes 425 pounds per bolt. Dividing this into 13,000 indicates that 31 bolts are needed, instead of the 20 bolts adequate for uplift. If fewer bolts are to be used, the sill must be made thicker. For example, the allowable wind loading if material $2\frac{1}{2}$ in. thick is used is 530×1.33 or 710 pounds per bolt. This calls for 19 bolts. Standard anchorage now is adequate. End and edge distances of wood around the bolts must be adequately designed according to standard wood engineering procedure as set forth, for example, in the National Design Specifications.

TABLE 3—VERTICAL AND HORIZONTAL COMPONENTS OF WIND LOADS

	Vertical	Load per Foot of Length	Length, feet	Load for 15 psf lb.	Horizontal	Load Per Foot of Length	Length, feet	Load for 15 psf lb.
W_v				0	$8 \times 0.8 P_w$	$= 6.4 P_{wh}$	40	3,840 ←
W_e	$2 \times 2 P_w \times 0.95$	$= 3.8 P_{wv}$	44	2,500 ↑	$2 \times 2 P_w \times 0.32$	$= 1.3 P_{wh}$	44	860 →
W_w	$15.8 \times 1.05 P_w \times 0.95$	$= 15.8 P_{wv}$	44	10,400 ↑	$15.8 \times 1.05 P_w \times 0.32$	$= 5.3 P_{wh}$	44	3,500 →
W_{le}	$17.8 \times 0.45 P_w \times 0.95$	$= 7.6 P_{wv}$	44	5,000 ↑	$17.8 \times 0.45 P_w \times 0.32$	$= 2.6 P_{wh}$	44	1,720 ←
W_{li}	$15.8 \times 0.45 P_w \times 0.95$	$= 6.7 P_{wv}$	44	4,500 ↑	$15.8 \times 0.45 P_w \times 0.32$	$= 2.3 P_{wh}$	44	1,520 ←
W_{lw}				0	$8 \times 0.45 P_w$	$= 3.6 P_{wh}$	40	2,160 ←
		33.9 P_{wv}		22,400 ↑		8.3 P_{wh}		4,880 ←

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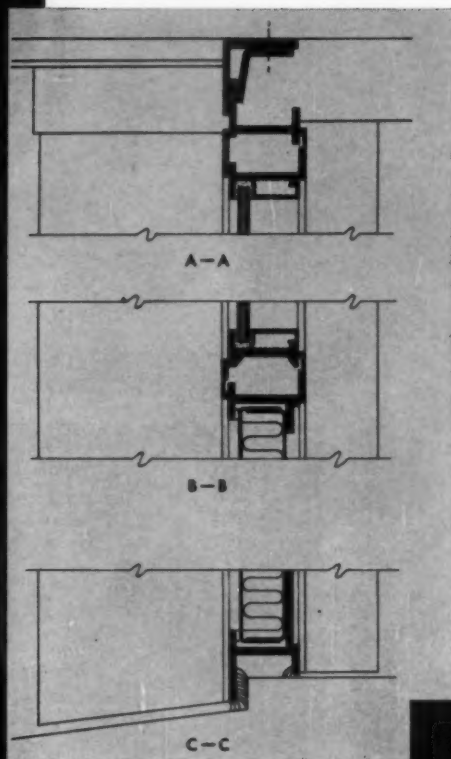
General Contractor:

Arkin Construction Company, Miami

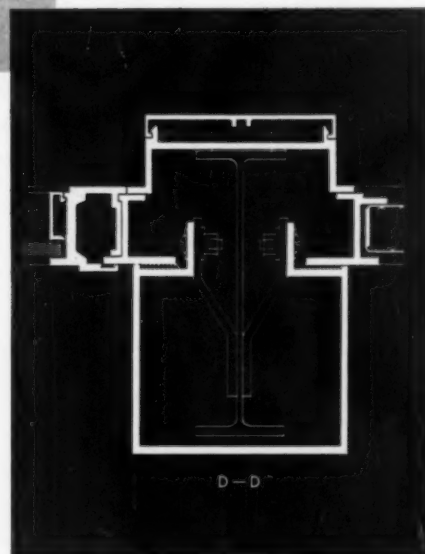
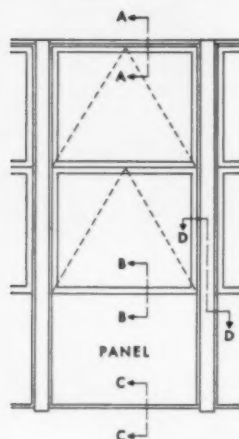
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ALUMINUM

TECHNICAL ROUNDUP

(Continued from page 222)

CATENARY UMBRELLA SHELTERS HYPOTHETICAL SCHOOL CAMPUS

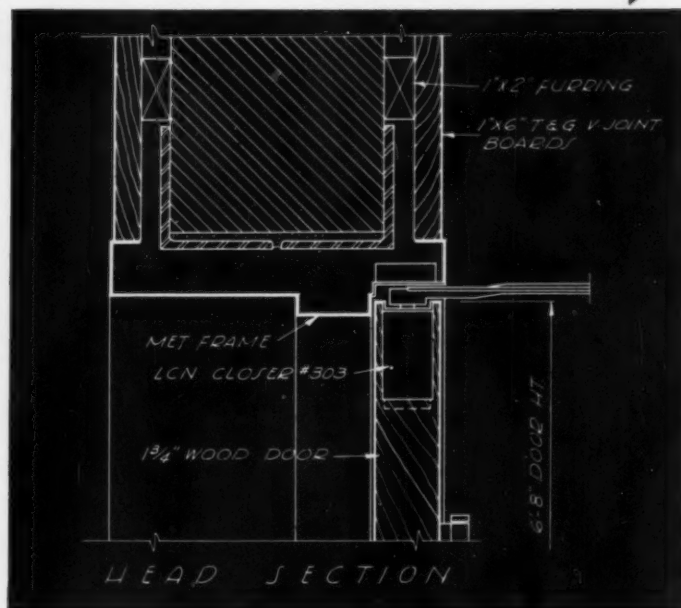
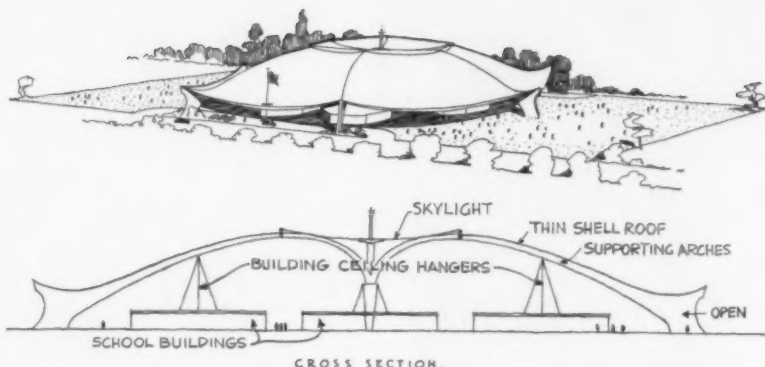
California architect Frank Wynkoop, A.I.A., first conceived of sheltering an entire school campus under a single roof while pondering a plastic dome protecting the delicate model of a group of school buildings. Pursuit of the idea that a similar protective shell might present many advantages for an actual school led to his design for the hypothetical campus scheme shown above right.

The project includes seven hexagonal buildings centered in a compact group on a five acre site and roofed by a fire-proof umbrella covering 138,000 sq. ft. of the ground area. Consisting of a series of catenary spans of steel cables and vermiculite concrete, the shell is supported on arched concrete ribs. Its underside is sprayed with acoustical plaster; the exterior surfaced with a vinyl plastic membrane. Light enters through a huge plastic skylight, as well as through the perimeter which is left open for ventilation and view.

Although the shelter provides a controlled climate that permits year-round outdoor play and maximum site utilization, its primary advantage lies in the savings made possible in the construction of the school buildings themselves. With an over-all shelter lessening the problems of environment control, interior structures can be merely thin shells of incombustible panels which provide thermal insulation, sound control, and separation and enclosure of interior space. Waterproofing, drainage and sun control cease to be problems, and heating and maintenance costs are greatly lowered. In addition, the buildings can be designed without provision for circulation via the usual corridors and covered walks. Because their roofs are suspended, foundations and structural framing are kept to a minimum, and interior partitions can be easily moved. Savings also result from a reduction in wall area. The hexagonal buildings have 65 per cent less perimeter wall than would rectangular ones of the same area; and the use of artificial lighting permits lower ceilings and walls than would be required for adequate daylighting.

Mr. Wynkoop estimates that a school of this type could be built for about \$700,000 exclusive of land, furniture and engineering, the low costs of the sheltered buildings making possible the investment in the thin shell.

(More Roundup on page 238)



CONSTRUCTION DETAILS

for LCN Closer Concealed-in-Door Shown on Opposite Page

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4. Closer is simple to install and to adjust
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Perkins & Will, Architects - Engineers

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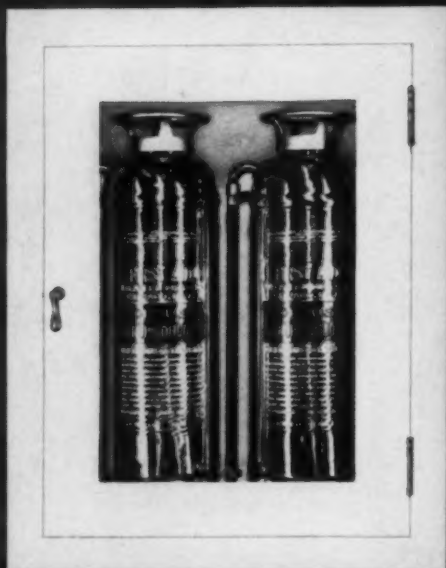
WHEATON COMMUNITY HIGH SCHOOL, WHEATON, ILLINOIS

LCN CLOSERS, INC., PRINCETON, ILLINOIS

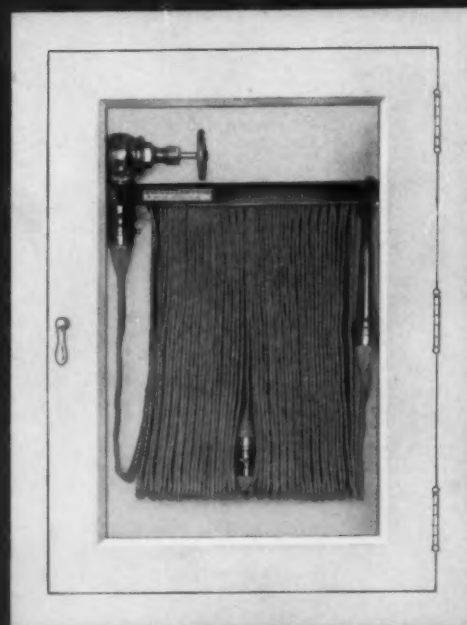
Construction Details on Opposite Page

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Allenco Fig. 285 is notably compact, contains one or two fire extinguishers and, if specified, tamperproof door.



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Where	What	Specifier	Installer	Fieldman
Springfield, Mass.	Junior High School	Maloney & Tessier	A. E. Stephens Co.	Harold Jope
West Hartford, Conn.	Junior High School	Nichols & Butterfield	Wadhams & May Co.	Harold Jope
Cincinnati, Ohio	Washington Park Elem. School	A. M. Kinney	B. A. Waltermann Co.	Dick Disney
Ann Arbor, Mich.	University of Mich. Library	Albert Kahn Assoc.	Dunbar-Borton	Russ Collins
Portland, Ore.	Woodrow Wilson High School	Tom E. Taylor	A. G. Rushlight Co.	Dick Finklea
Salem, Ore.	South Salem High School	Tom E. Taylor	Vern Collins Flbg. Co.	Dick Finklea
Salt Lake City, Utah	Latter-Day Saints Church	Owner	Owner	Nic Nicodemus
New Orleans, La.	St. Martin's School	James M. Todd & Assoc.	Frank A. Dorsa	Bob Barnes
Pullman, Wash.	Women's Residence, W. S. C.	James B. Natkin	Senna Service, Inc.	Stan Schafer
Moscow, Idaho	University of Idaho Library	Whitehouse, Price, DeNeff & Geeble		
Minneapolis, Minn.	Zion Lutheran Church	Thorsov & Cerney, Inc.	Detweiler Bros.	Stan Schafer
St. Louis Park, Minn.	Cathedral High School	Louis C. Pinault	Dean L. Witcher, Inc.	Art Narverud
LaFayette, Ind.	Purdue University Dorms	Walter Scholer	Roel Construction Co.	Art Narverud
Bloomington, Ind.	I. U. Medical Science Building	Ammerman, Davis & Stout	Frey Bros.	Don Davison
Fairview Park, Ohio	High School	Fulton, Krinsky & DeLaMotte	Hayes Bros.	Dick Finklea
Gates Mills, Ohio	St. Francis of Assisi Church	Horn & Rinehart, Archts.	Gorman-Lavelle P & H	Jerry Sullivan
Pittsburgh, Pa.	High School	P. B. Fleming, C. Engr.	Gorman-Lavelle P & H	Jerry Sullivan
		Celli & Flinn	John Kennelly	Wm. Negie



Harold Jope



Dick Disney



Russ Collins



Stan Schafer



Art Narverud



Don Davison



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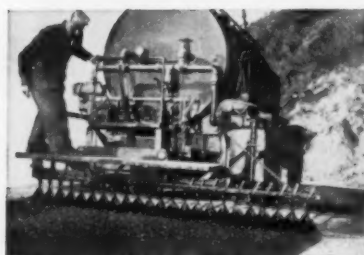
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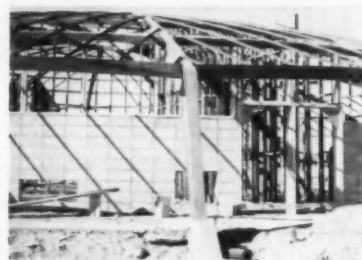
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TECHNICAL ROUNDUP

WELDED STEEL BENTS SPAN DUAL-PURPOSE CAFETORIUM



Meeting head-on the familiar problem of providing more space for less money, Arizona architect John Sing Tang recently presented the Gila Vista School in Yuma, Arizona, with a domed circular structure designed to serve dually as cafeteria and auditorium.

The interior space of the "cafetorium" is divided by a stage set slightly to one side of center, under the high portion of the roof. Behind it are ranged the kitchen, storage rooms, equipment room and toilets; in front is a large semicircular open area for dining — and looking.

Broken bents of all welded steel span the 88 ft across the cafetorium, enclosing an area of 6082 sq ft with no interior supports. To resist the outward thrust of the arches, the bents are tied with reinforced concrete ties beneath the slab. Knee and column sections are fabricated from steel plate; the arches are rolled wide flange shapes; and the purlins are welded boxed channels bent to the dome's radial curves. For the roof, a monolithic slab of 2 in. gypsum was poured over 2 in. acoustical form-board and topped with a reflective built-up roof. Both the steel and the form-boards were left exposed on the interior.



(More Roundup on page 240)

How ANEMOSTAT

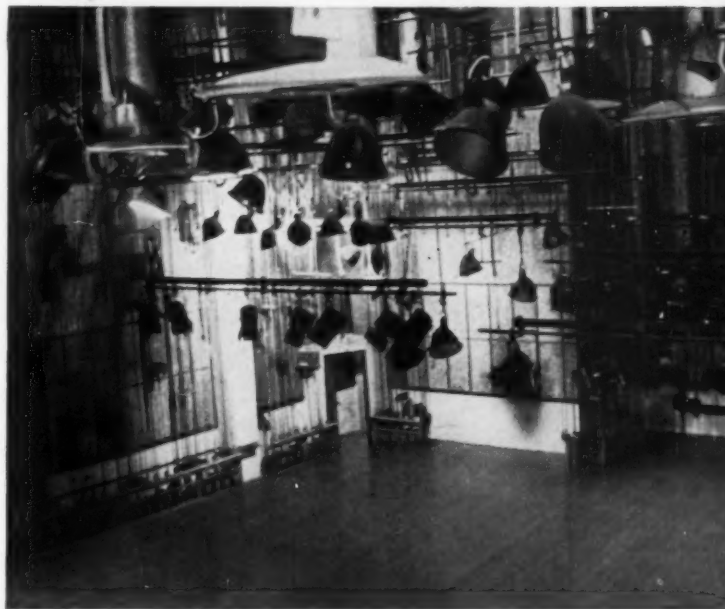
Air Diffusers help make movies

A carefully designed air conditioning system enables Production Center, Inc. to make movies at top speed during the hot summer months. In fact, production has been increased by three to four times, according to Center estimates.

Anemostat Air Diffusers help do this vital job. They draftlessly diffuse 20,000 cubic feet of cooled air per minute pushed by giant fans through the soundproofed ducts. The two main studios have 32 vertical ducts, ranging in diameter from 18 to 24 inches; of these, 24 are telescopic and can be raised or lowered to suit requirements. The conditioned air, efficiently distributed by Anemostat Air Diffusers, offsets the heat from the tremendous wattage of the lights needed for film-making.

Movie-viewing, as well as movie-making, is aided by Anemostat Air Diffusers. They are installed in hundreds of theatres throughout the country. Anemostat Air Diffusers also provide *true* draftless comfort and uniform air distribution in schools, hospitals, banks and practically all types of commercial and industrial buildings.

One of three completely air conditioned sound stages at Production Center, Inc. in New York City.

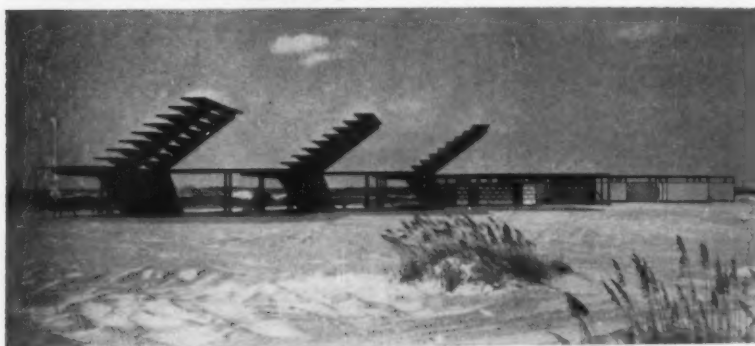


Note the Anemostat Air Diffusers installed on the telescopic ducts.

Joseph B. Klein, Architect
Robert Glenn, Inc., General Contractor
Wolff & Munier, Inc.,
Mechanical Contractors



For complete data, write for your copy of the new Anemostat Selection Manual No. 60 to Anemostat Corporation of America, 10 E. 39th Street, New York 16, N. Y.



Angling upward in sharp contrast to the surrounding dunes, the windblown structures shown at left are slanted and slatted to allow the free passage of ocean breezes while providing welcome shade for visitors to the Coquina Beach Day Use Area in North Carolina.

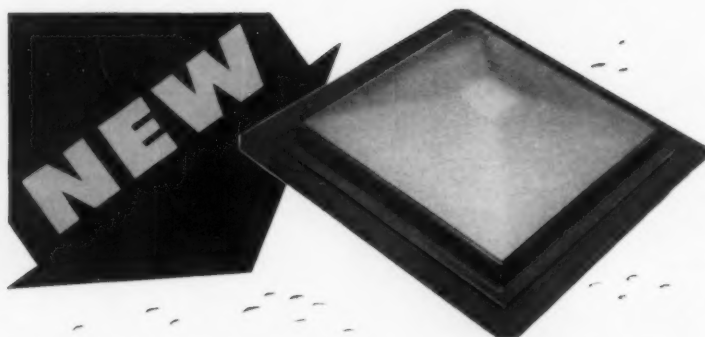
When John B. Cabot, supervising architect for the Department of the Interior's Division of Design and Construction, first undertook the design of a recreational structure on Cape Hatteras, nothing more was involved than a shelter. However, the program ultimately developed to include other public facilities — within the slim budget allotted for the shelter alone. In addition to the three timber shade structures, the project now includes a boardwalk of girder, joist and plank construction supported on piles, and frame buildings to house dressing enclosures, rest rooms, storage space, and facilities for first aid, information and control.

The primary site problem was posed by the sand-carrying prevailing winds which sweep constantly along the dunes. Thus the shape of the shade structures evolved from the attempt to arrive at a form that would produce maximum shade and use materials economically, while presenting minimum surface to sand-blasting by the winds.

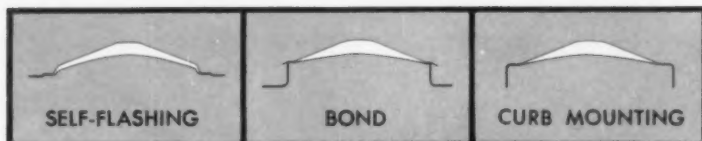
As finally executed, the shelters consist of horizontal fins of 4 in. double tongue and grooved cedar decking, factory assembled in 4 ft sections and cantilevered from a laminated wood superstructure. The fins, which are spaced 18 in. apart to allow free passage of winds, overlap enough to provide a completely shaded, though moving, area beneath the shelters from early morning to late afternoon during the summer months. Although the decking was treated with pentachlorophenol, it was given no other protective finish except for painting of the edges. The shade structures have foundations of cross braced steel piles with horizontal timbers buried in the sand as deadmen.



(More Roundup on page 244)



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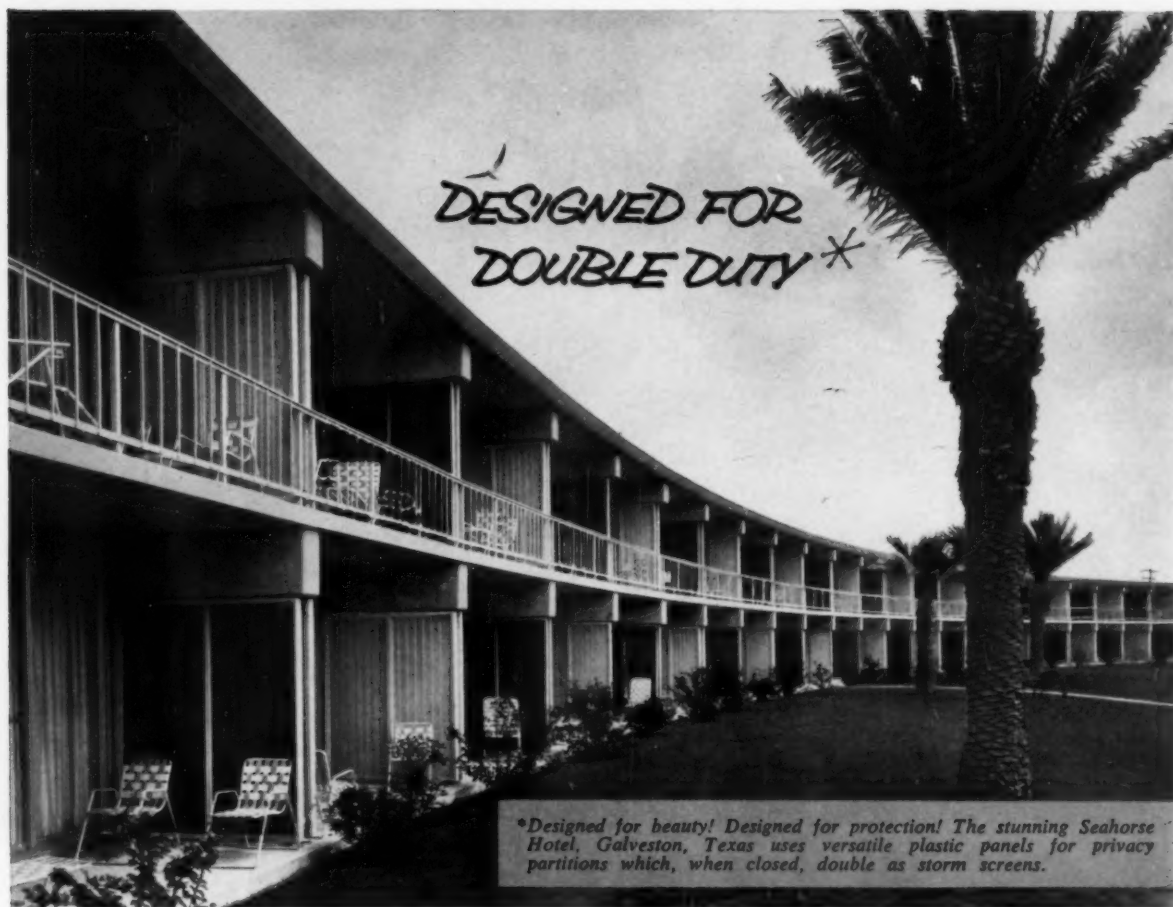
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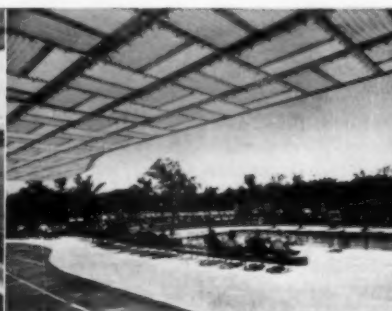
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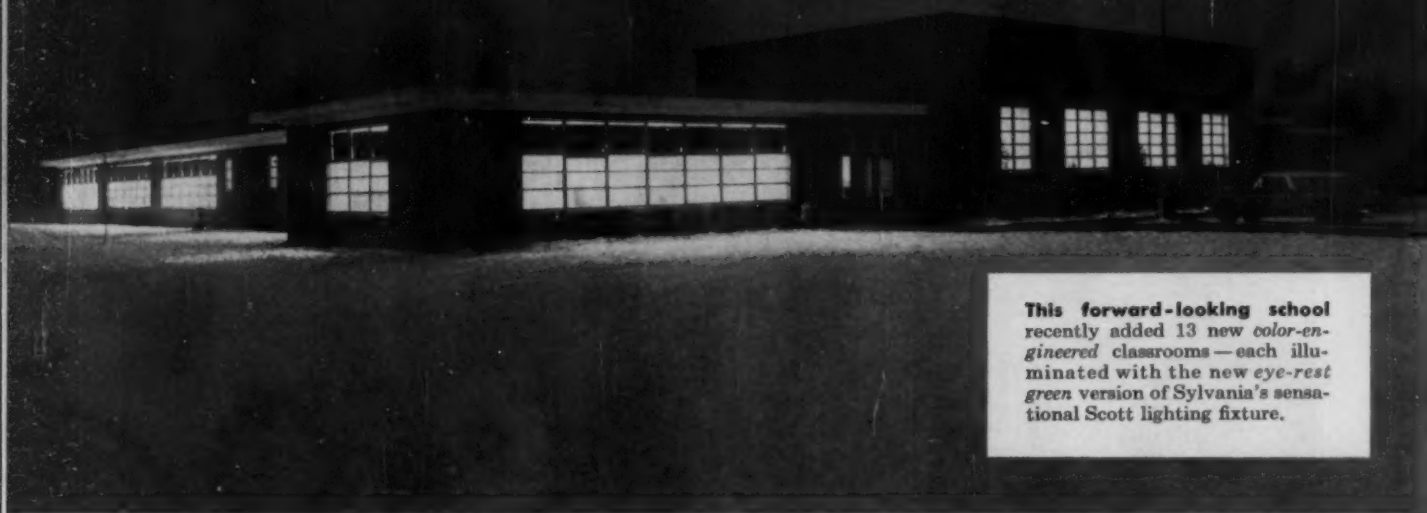
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The Blauvelt School Story...



This forward-looking school recently added 13 new *color-engineered* classrooms—each illuminated with the new *eye-rest green* version of Sylvania's sensational Scott lighting fixture.

Sylvania Eye-Rest Green Scott Fixture makes



Principal Leo Poulos (l.) and School Board President H. L. Niederauer compare the Scott with 3-year-old lighting . . . find the Scott's footcandle levels far greater—and brightness contrasts at a minimum.

THE magic of *color engineering* has gone to work in the modern Blauvelt, N. Y., School. Colorful new classrooms help motivate students to enjoy their schoolwork. Sylvania's Scott fixture, with translucent eye-rest green louvers, enhances the various color schemes with the latest in classroom lighting.

The Scott's eye-rest green plastic adds a new lighting element—*cool chromatic eye comfort*. It blends well with vari-colored pastel interiors . . . pinks, blues, yellows and tans. The whole effect gives students better seeing conditions in pleasant, work-inspiring surroundings.

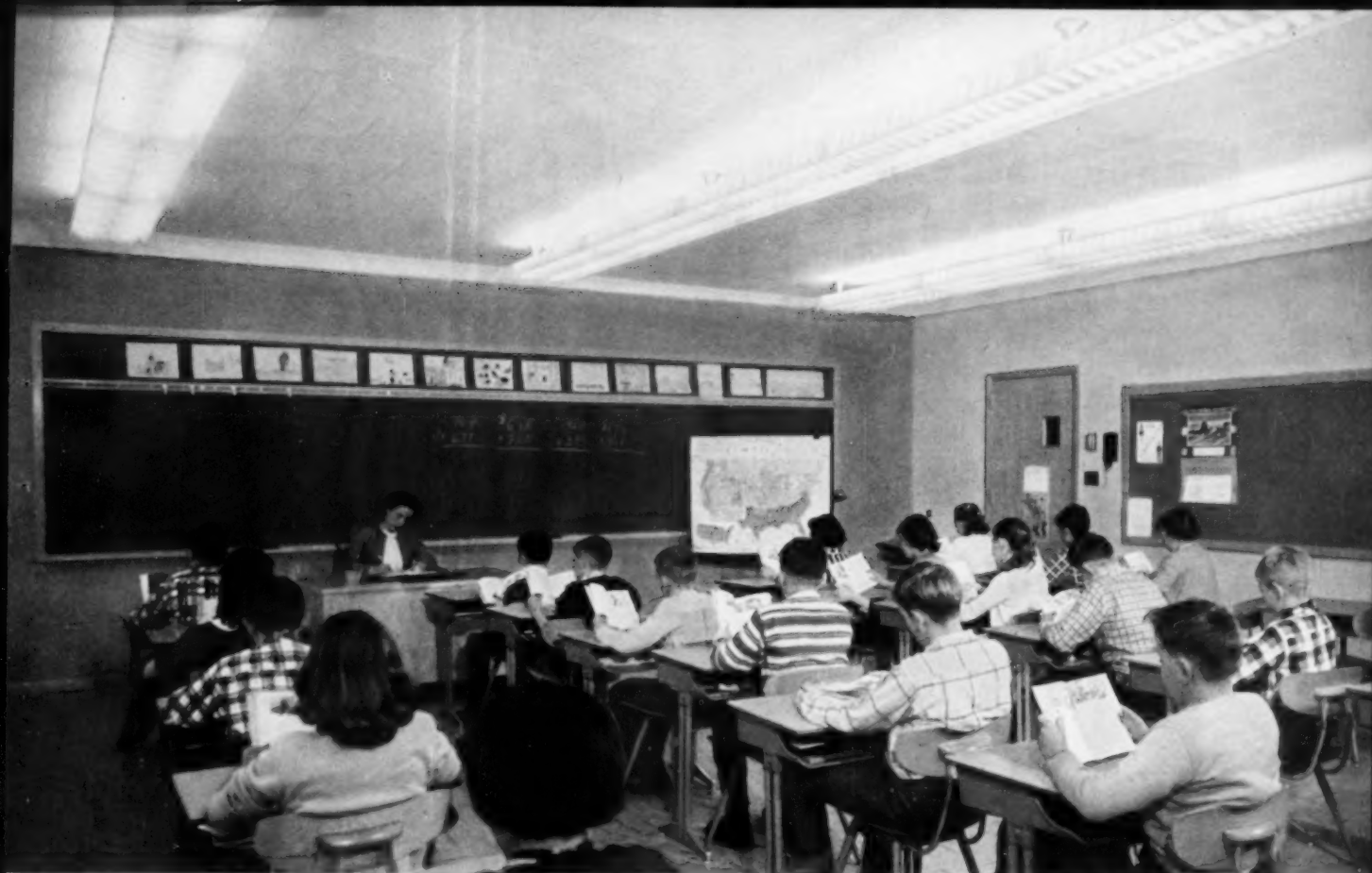
The Scott provides extremely high illumination efficiency. With its translucent louver, it softens overhead contrasts, and shields young eyes from direct lamp glare.

Maintenance supervisor R. Palin likes the Scott's one-man maintenance features. Four-foot shields are lightweight . . . swung down easily for lamp changes . . . removed quickly for cleaning.

The *latest* and the *right* classroom lighting, with Sylvania's *Scott*, makes big differences here . . . in seeing conditions, appearance, and lighting economy over the long and short haul. It can make the same big differences in *your* next remodeling job, new wing, or new building. Talk to your Sylvania Fixture Specialist for complete lighting information. And write today for our **FREE** information folder on lighting with the sensational Scott . . . for schools.

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TECHNICAL ROUNDUP

EIGHT ACRES OF ALUMINUM TO FACE MANHATTAN SKYSCRAPER



The largest aluminum curtain wall to date has been spread over the eight-acre face of a 33-story office building now under construction at 666 Fifth Avenue in New York City.

A total of 2950 prefabricated aluminum panels, each 7½ ft wide by 11 ft high, will make up the building's facade. The upper half of each panel contains a window unit composed of a central pivoting sash flanked by fixed sash on either side. The lower half is a spandrel of anodized aluminum, die-pressed with a design of alternate rows of small pyramids to give greater structural rigidity as well as a decorative pattern. For vertical accent — and greater freedom in subdividing the interior space — adjacent panels are separated by narrow "wall" sections which extend the entire height of the building. Fabricated of white porcelain enameled aluminum, these 20 in. vertical strips are framed on each side by a 3 in. polished aluminum border.

The panels are set in place from inside the building and bolted to vertical steel rails previously welded to the building's frame, each unit interlocking at the bottom with the one below it. The steel weldments, which consist of 5 in. channels and 3 in. angles varying in length from 11 to 20 feet, are zinc-sprayed to prevent corrosion.

The building, whose 38 stories enclose more than a million square feet of office space, was designed by architects Carson and Lundin of New York City. Panels were fabricated by Reynolds Metals Company.

(More Roundup on page 248)



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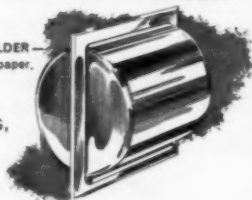
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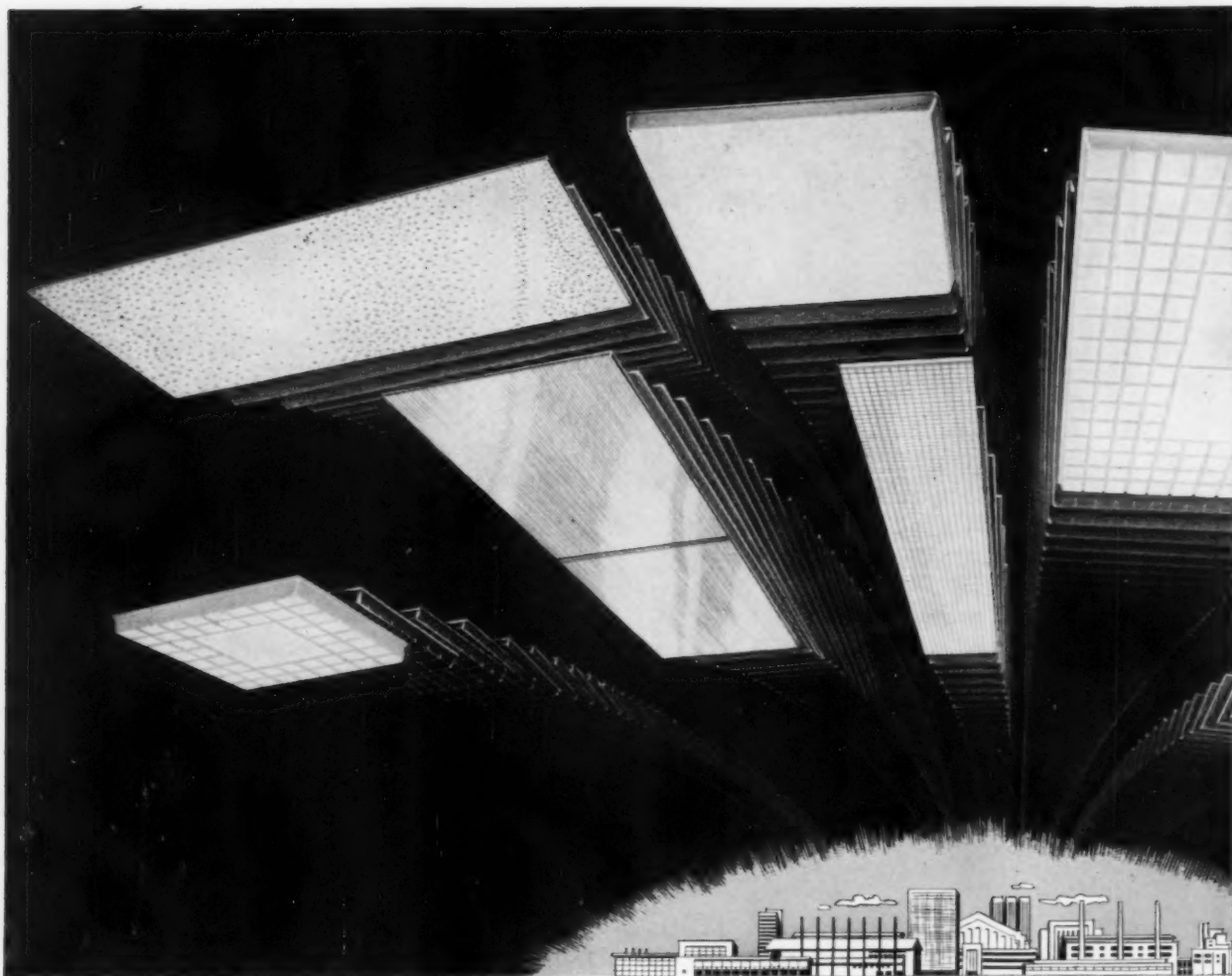
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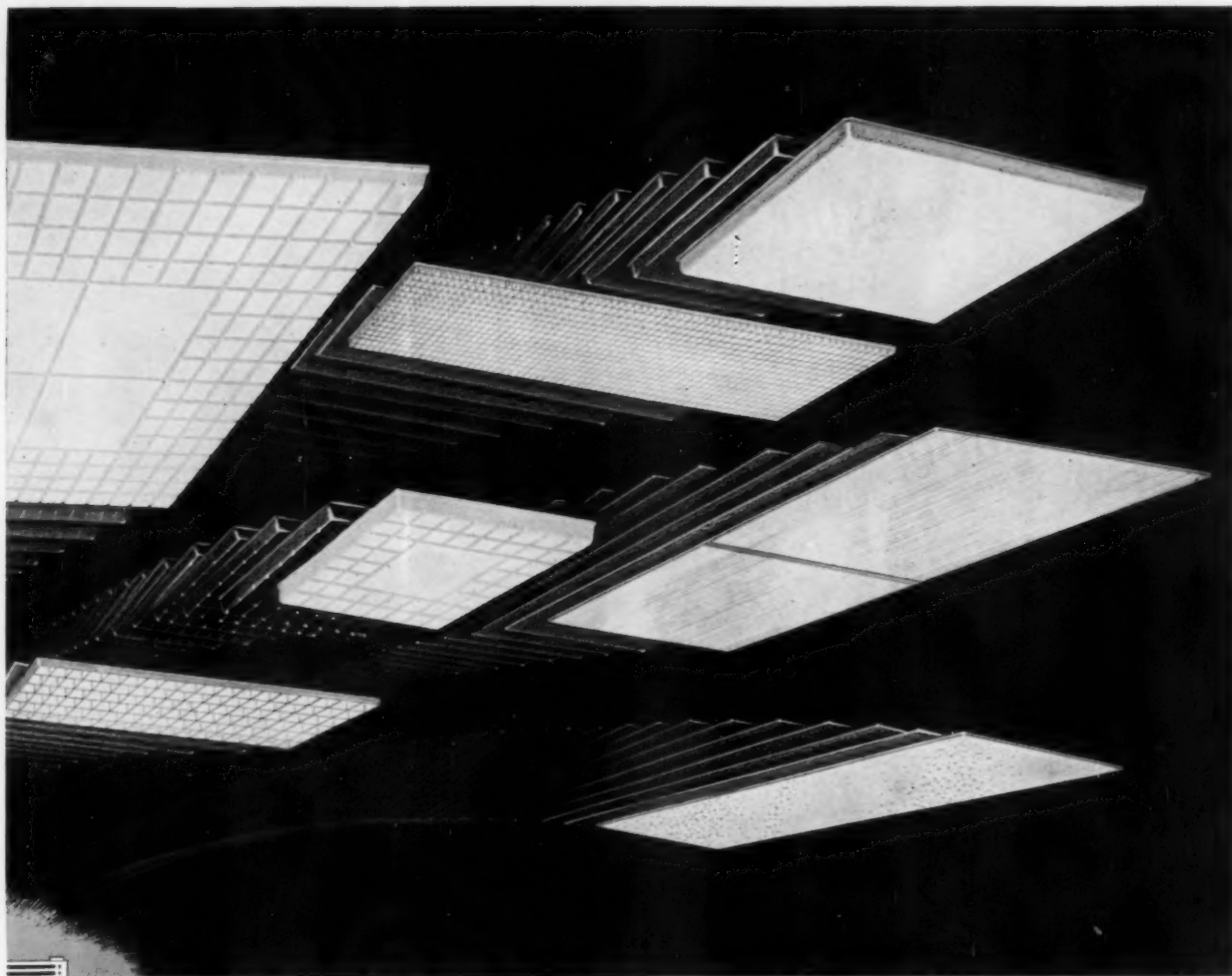
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that would follow roof
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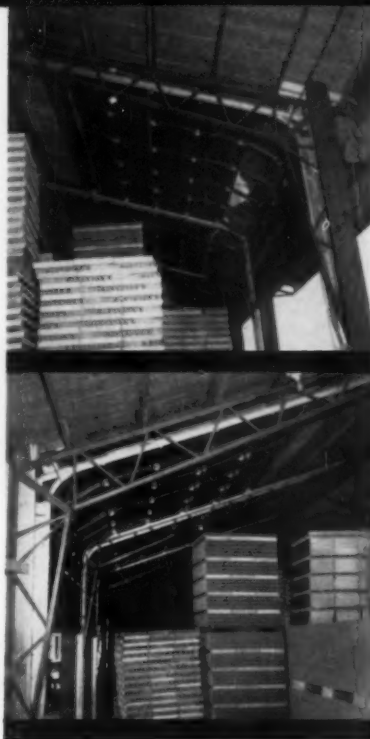
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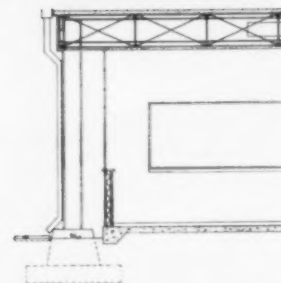
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TECHNICAL ROUNDUP

FLORIDA HIGH SCHOOL BUILT SANS WOOD OR MASONRY



In designing the new Lincoln High School in Gainesville, Florida, architects Myrl Hanes Associates approached the twin requirements of flexibility and economy by discarding wood or masonry framing in favor of steel framing combined with non-loadbearing open web steel stud walls and solid plaster partitions. This scheme is used throughout the project, which includes a cafeteria, auditorium and gymnasium in addition to administrative offices and classroom facilities for a student population of 1200.

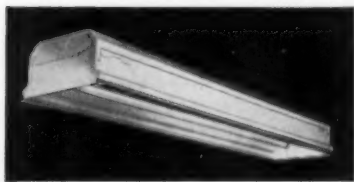
Three principal tactics were taken to provide, within the slim budget, a school plant that would meet all the educational requirements. The first step in reducing costs was the obvious one of maximum space utilization. Although the "accepted solution" in Florida at the time was the single loaded corridor scheme, Mr. Hanes and his associates used double loaded corridors, feeling that in this way constructed space would be used most efficiently. The attendant problems of light and ventilation were solved by the use of skylights, roof ventilators and, on the southern exposure, vertical louvers supported by a long overhang. (See photo above.)

The second area of economy was the duplication of stock or standard units

(Continued on page 252)



MANUFACTURER SHEDS NEW LIGHT ON **WEIRZIN[®]** RUST PREVENTION



In the market for a rust-resistant, eye-appealing and economically enduring zinc-coated steel? Then tune in on what the Edwin F. Guth Co., St. Louis, Mo., a leading manufacturer of lighting fixtures, has to say about Weirzin. For example:

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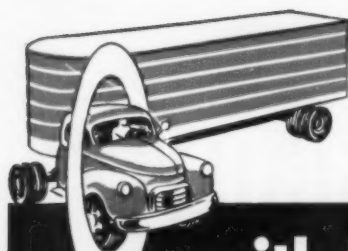
Gold Bond
BUILDING PRODUCTS

THIS new Sears store is outstanding among the new retail establishments built in New Orleans since World War II. It is also a perfect example of how Gold Bond's idea of *undivided responsibility* works to the benefit of architects, builders, and owners.

The theory of undivided responsibility has been in effect and practiced by National Gypsum Company for many years. The idea is based on furnishing a complete line of ceiling and wall materials, all manufactured by one concern, all made to work together.

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Write *Undivided Responsibility* into your specifications by including complete Gold Bond wall and ceiling systems in your plans. For more information call your Gold Bond® representative or write Dept. AR-77, National Gypsum Company, Buffalo 2, New York.



No needle to thread..

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Loading Dock—Firestone Tire & Rubber Co.

Plans by Firestone General Contractor—Building Constructors, Inc.
Memphis, Tenn.

How often truckers complain—"It's like threading a needle to back to their loading dock"! Not with Byrne Doors, however!

Byrne doors are designed especially for your industrial building applications and to meet any size requirement. They are motor operated, upward acting, suspended by cables which transmit dead loads to compact counterweights. They offer lifetime economies to industrial management by providing:

SWIFT OPERATION using minimum operating power.

SNUG WEATHERING permitting reduced initial investment in heating plants and effecting substantial fuel savings.

MINIMUM MAINTENANCE costs which have run less than 1/4 of 1% to 1% per annum over periods of 15 to 20 years.

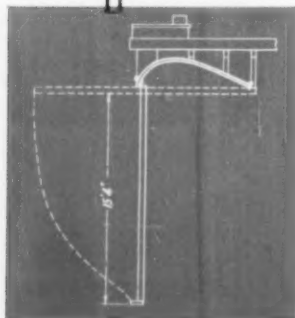
SPACE SAVING permitting full use of enclosed floor area and forming canopies, which add to the effective working space during mild weather.

COMPLETE SAFETY of multi-cable, balanced suspension; rigid construction to withstand hurricane wind velocities; automatically self-locking operator mechanisms and overload relays.

BYRNE TYPE B CANOPY DOORS . . .

are recommended for openings up to 120' wide. They are restrained by jamb guides and overhead tracks.

For other Byrne Door applications consult Sweet's Catalog or write directly for free brochure.



BYRNE doors, inc.

1603 E. 9 Mile Road, Ferndale, Detroit 20, Mich.
New York 17, N.Y. • Washington 6, D.C. • Toronto 28, Ont.

Dept.
r-22

TECHNICAL ROUNDUP

(Continued from page 244)

and details wherever possible. The same rigid steel bent was used throughout both classroom wings, the vocational wing, the library and the cafeteria, while two and three hinged arches were used for the auditorium and gym respectively. With only a slight variation in the end condition, identical bar joists could be used for all the structures. Window units were also duplicated throughout, their heights changing only in the corridors and the gym, and their widths and mullion detail remaining the same in every case. The architects also cut costs by designing so as to reduce the number of subcontracts. With the steel and plaster construction used, two large subcontracts—steel fabrication and erection, and lathing and plastering—accounted for more than 30 per cent of a total construction cost of \$929,865.



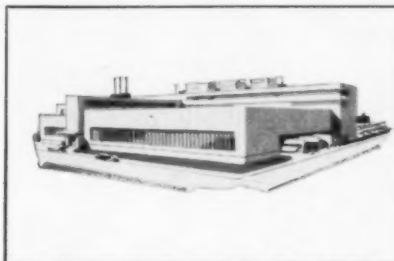
RUBBER FLOOR DESIGN AWARDS COMPETITION ANNOUNCED

A Rubber Floor Design Awards competition open to professional designers, architects, decorators and floor installers has been announced by the Rubber Flooring Division of The Rubber Manufacturers Association, Inc. A Designer's Award of \$1500 (and an Installer's Award of \$500) will be made for the best-designed rubber floor installed in an industrial or commercial building during the period from January 1 to December 31, 1957. Six Honorable Mention citations will also be given. Judges for the competition are Leon Chatelain, Jr., president of the American Institute of Architects; Marc T. Nielson, president of the American Institute of Decorators; and John Knox Shear, editor-in-chief of ARCHITECTURAL RECORD. Complete details are available from the Rubber Floor Design Awards Committee, Rubber Flooring Div., The Rubber Manufacturers Assoc., Inc., 444 Madison Ave., New York 22, N. Y.

Asbestone Panels add insulation to curtain walls, and privacy to office space

With Gold Bond ASBESTONE PANELS, you can plan for the strength and permanency of stone in both exterior curtain walls and movable office partitions. These versatile, easy-to-handle panels help make planning simpler, help make construction more economical.

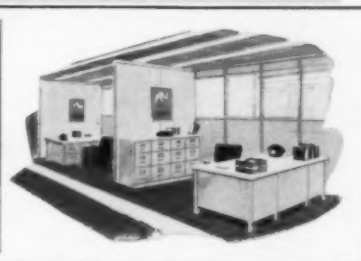
ASBESTONE PANELS are made of Asbestos-Cement sheets, laminated to both sides of a structural insulation core that's asphalt-impregnated and chemically-treated to resist weather, moisture, mildew and rot. Fire-resistant ASBESTONE PANELS are four feet wide — available in 6', 7', 8', 9', 10' and 12' lengths...in four thicknesses. A size or thickness for every building recommendation.



CURTAIN WALLS of Gold Bond ASBESTONE PANELS save your clients' money in initial costs and in maintenance. They resist corrosive and acidic fumes, are fire and rot-resistant.



EXTRA STRENGTH AND INSULATION. Gold Bond ASBESTONE PANELS add extra strength and insulation when used with other curtain wall materials such as Gold Bond Corrugated "400."



MOVABLE OFFICE WALLS—to give client personnel the privacy they need *and* keep office layouts flexible. Far less expensive than permanent partitions—and they help reduce office noise.

The surface of a Gold Bond ASBESTONE PANEL has the strength of rock. The core is Gold Bond® Insulation Board, made by an exclusive Fiberlok process that locks strength in, keeps heat transfer to a minimum.

Our new manual contains complete information for architects' reference in planning panelized curtain walls for factories, schools, hospitals... inside or outside use. For your copy, write Dept. AR-77, National Gypsum Company, Buffalo 2, New York.



ASBESTONE PANELS

NATIONAL GYPSUM COMPANY

Gold Bond
BUILDING PRODUCTS

Lippincott & Margulies choose Bigelow carpet for famous Hotel Dennis

One of the country's top design firms is Lippincott & Margulies of New York.

Among its recent successes is the impressive Fjord Lounge of the Hotel Dennis in Atlantic City, N. J. Bigelow Empire Rexton was chosen as the carpeting. Both Walter Margulies, firm partner, and Robert de Veyrac, who supervised the work at the Hotel Dennis, agree on the outstanding quality of Bigelow Carpets. Mr. Margulies comments:

"The Fjord Lounge in the Hotel Dennis is a convertible luncheon-cocktail room. It was designed to provide a pleasant, attractive atmosphere that is as informal and individual as a friend's living room.

"Bigelow Carpet was especially applicable here. Previous performance has shown that it holds up well under heavy traffic. And Bigelow has always been most willing to produce special patterns in a wide range of colors, such as the one we designed for the Fjord Lounge, or re-color stock patterns when desired. Bigelow Carpet, we have found, is easy to install and provides excellent performance and appearance."

If you are planning an installation, consult your Bigelow trained carpet specialists for the right color, pattern and weave... at a price your client can afford. This service is available free of charge.

Get in touch with Bigelow today through the nearest sales office or by writing to Bigelow Contract Dept., 140 Madison Avenue, New York 16, N. Y.



Robert de Veyrac, on the left, head of Lippincott & Margulies' Hotel Design Department, consults with Walter Margulies. This prominent firm is credited with design accomplishments in foremost hotels in and out of the country, including: the Hotel Dennis in Atlantic City; the Hamilton Hotel in Washington, D. C.; the Conrad Hilton in Chicago; the Emerald Beach Hotel in Nassau, B.W.I.; the Hotel Gran Bolivar in Lima, Peru; the Curtis Hotel in Minneapolis and the Vanderbilt Hotel in New York City.



The charming Fjord Lounge of the Hotel Dennis in Atlantic City invites luncheon or cocktails. Bigelow's Empire Rexton is the carpeting.



Bigelow

fine rugs and carpets since 1825

Bigelow sales offices are located in the following strategic cities: Atlanta, Ga.; Boston, Mass.; Buffalo, N. Y.; Chicago, Ill.; Cincinnati, Ohio; Cleveland, Ohio; Dallas, Tex.; Denver, Col.; Detroit, Mich.; Hartford, Conn.; High Point, N. C.; Kansas City, Mo.; Los Angeles, Calif.; Minneapolis, Minn.; New York, N. Y.; Philadelphia, Penna.; Pittsburgh, Penna.; St. Louis, Mo.; San Francisco, Calif.; Seattle, Wash.

see our catalog in



or write for copy

PRODUCT REPORTS

(Continued from page 223)



MOVABLE WALLS HOLD OFFICE FURNISHINGS

The L. A. Darling Company has restored to the office partition its load-bearing function. Although their new movable partition doesn't presume to serve as a structural member, it does support enough office miscellany to justify its name of *Workwall*. A direct descendant of the familiar *Vizusell* system of channels, brackets and attachments for merchandise display, it employs uprights grooved along their entire length to hold heavy-duty brackets from which office

furnishings and accessories — from desks to flower pots — can be suspended at any desired height, adding the wall area to the usable space within a room. Putting up or taking down the brackets requires only gentle coaxing with a screw driver.

To perform its more prosaic function of partitioning office space, the *Workwall* combines uprights with sound-deadening sandwich panels set in a channel frame and secured to the posts with clear plastic clips. The panels, which are 1 3/4 inches thick and 1, 2, 3 or 4 feet wide, are faced with *Marlite* plastic finished hardboard in simulated wood grains, linen patterns, or a wide range of solid colors. Solid partitions may also be combined with top panels of glass. Made in five sizes from rail to ceiling high, *Workwall* partitions stop four inches short of the floor so that they may be installed free standing as well as with closed bases. If closed bases

Color

ACCENT

ARCHITECT SPECIFIED

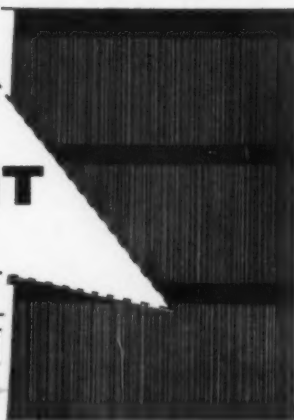
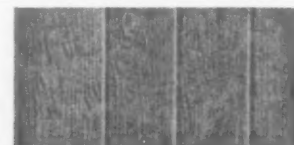
In the natural texture of real wood

Shakertown® GLUMAC® UNITS

Rich colors in gorgeous pre-stained Shakertown Glumac Units create vitality and motion when combined with more static materials. Color design with a familiar material used as a striking accent!



U. S. Patent 2,232,876. Other U. S. and Foreign Patents Pending.



GROOVED CEDAR SHAKES

INSULATION BOARD

Write for
FREE
"Shakertown
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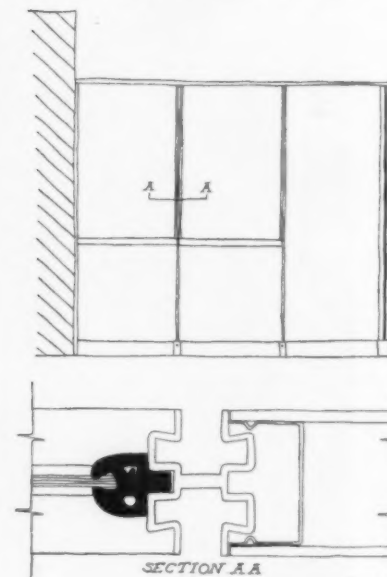


Shakertown®

FIRST NAME IN CEDAR SHAKES

THE PERMA PRODUCTS COMPANY

20310 KINSMAN ROAD • CLEVELAND 22, OHIO

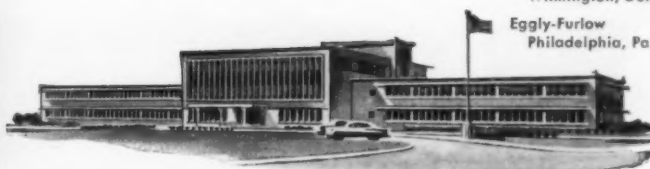


are desired, the electric and telephone wires are stowed away behind removable baseboards, passing through dual slots near the bottom of the posts. To compensate for uneven floors, the posts are set in adjustable steel feet which are securely clamped to the floor. Outside walls can be made to conform with the interior partitions by fastening single faced *Workwall* uprights directly to existing stone, brick, cement or concrete block walls and clipping 1/4 inch matching panels to them. L. A. Darling Co., Bronson, Mich.

(More Products on page 260)



Shirt-sleeve comfort in the window-wall area



Whiteside-Moeckel-Carbonell
Wilmington, Del., Architects
Eggy-Furlow
Philadelphia, Pa., Engineers

**FOR ATLAS POWDER CO.
WILMINGTON, DEL.**

Sill-line puts all space to work!

In many window-wall buildings with central fan systems, the outer borders must be written off as an unproductive area . . . workers avoid these frigid zones because of the cold window problem. But in the general offices of Atlas Powder Company, each floor is 100% usable because Nesbitt Sill-line places heat along the cold windows to combat chilling downdrafts and protect against excessive loss of body heat to the cold surfaces. Nesbitt developed Style G Sill-line for this specific purpose. Its low-capacity, finned-tube radiation forms a blanket of protection whenever and for as long as needed—making the window zone a desirable place to work.



Men at work—with no threat to comfort



It's pleasant along the daylight perimeter



**SILL-LINE SAVES
THE MOST VALUABLE
WORKING SPACE . . .
AT THE PERIMETER
OF THE BUILDING**

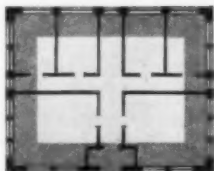


Figure it as you please . . . without cold window protection you can lose 10 to 20% of working space . . . with it you can save as much in construction cost.

*Nesbitt Sill-line is
high-capacity finned radiation
in a beautiful modern enclosure;
five cabinet styles; seven standard lengths;
steam or hot water; 700 to 2900 Btu/lin. ft.;
one-piece back panel; quick, easy installation;
every needed accessory available.*

SEND FOR PUBLICATION 102

Nesbitt

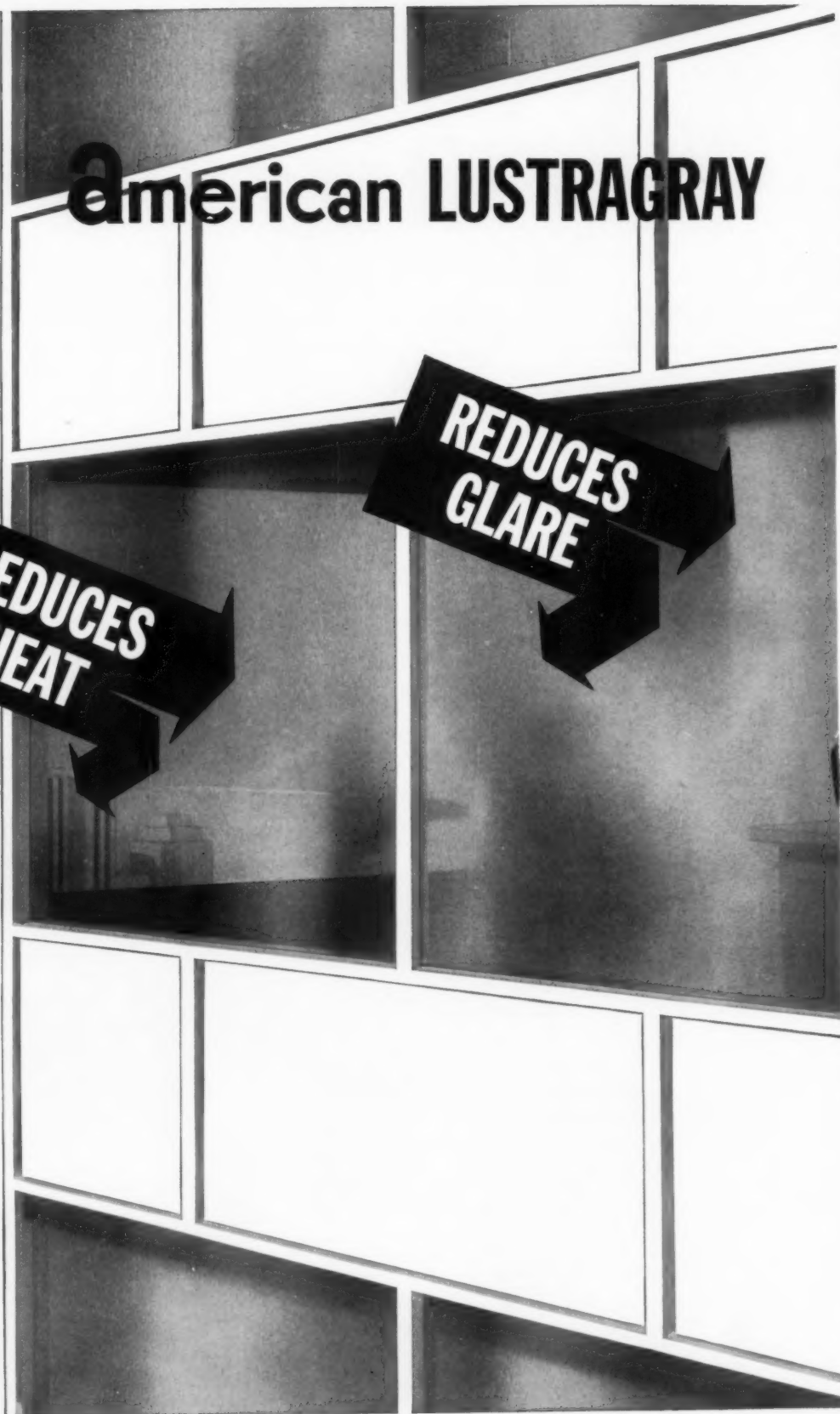
SILL-LINE RADIATION

Made and sold by John J. Nesbitt, Inc., Philadelphia 36, Pa.

American LUSTRAGRAY

**REDUCES
HEAT**

**REDUCES
GLARE**



Sheet Glass

Features

- Reduces glare approximately 50%
- Provides an effective reduction in transmission of solar energy
- Neutral gray tint blends with all colors used in or on buildings
- No special installation handling
- Non-fading
- Economical



For additional information contained in an eight-page Catalog, write to our Architectural Promotion Department today.



Reflection #1: AMERICAN'S Sheet Glass



Reflection #2: Competitive Sheet Glass

Reflection tests show that AMERICAN'S sheet glass has the least distortion and provides the most attractive appearance. It can be used in place of plate glass—resulting in substantial savings.

SOLAR ENERGY TRANSMISSION*

AMERICAN LUSTRAGRAY	3/8"	1/2"	3/4"
Total Visible Light	61.8%	58.8%	55.0%
Ultraviolet	63.7%	63.0%	61.0%
Infrared	73.4%	71.7%	68.5%
Total Solar Radiation	68.3%	66.3%	62.6%

*Average radiant energy at normal incidence, with energy distribution equivalent to air mass equal 2.

• Maximum Size: 6' x 10'

MODERN GLASS
Best at a Glance

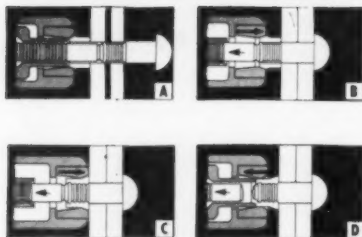


WSW 6643

American
WINDOW Glass COMPANY
PITTSBURGH, PA.

PLANTS: ARNOLD, PA. • ELLWOOD CITY, PA.
JEANNETTE, PA. • OKMULGEE, OKLA.

PRODUCT REPORTS

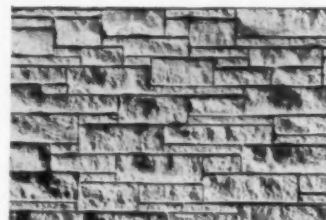


Rivet-Type Lockbolt Fastener

The Type CL Commercial Huckbolt is a lockbolt type fastener which features

rapid installation and a high tensile pre-load. Consisting of a pin and collar, it clamps adjoining metal surfaces together with enough force to prestress the pin portion in tension comparable to a highly torqued bolt, but weighs only half as much as a bolt and nut of similar material. Installation, as shown in the sequence at left, is simple and rapid. After the pin is inserted in the hole and the collar applied (a), it is drawn through by a lightweight fastening tool until the faying surfaces are brought into contact (b). As the gun continues to apply tension, the collar is swaged into locking

grooves on the pin (c), and the pin finally breaks off flush with the collar at a breakneck groove provided in the fastening design (d). According to the manufacturer, the fasteners can be installed by a two-man team at the rate of 30 per minute, over an extended period of time. *Huck Mfg. Co., 2480 Bellevue Ave., Detroit 7, Mich.*



Double Faced Building Stone

Contemporary Austone, a natural Texas limestone produced with one side split-face as shown above and the other side sawed finish, allows the architect to design with either one or any combination of the two. Cut in random lengths with face heights of 1½, 3½ and 5½ inches, and a bed thickness of 3 inches, the new double faced stone is said to provide 25 per cent more coverage than ordinary random ashlar, giving it a cost comparable to face brick. It is available in three classic grades: Cream, Shell and Travertone. *Texas Quarries, Inc., P. O. Box 91, Austin, Texas.*



LUTHERAN BROTHERHOOD HOME OFFICE BUILDING, Minneapolis, Minnesota. Architects: Perkins and Will, Chicago. General Contractor: Kraus-Anderson, Inc., Minneapolis. "Twinview" and Glazing: Pittsburgh Plate Glass Company.

Modern Sealing for Modern Design

Contributing to the attractive curtain wall construction of the Lutheran Brotherhood Building are two Vibradamp products for modern design . . . #3474 FORM-A-SEAL, a non-hardening, non-shrinking, permanently pliable sealing tape . . . and #1270 FLEXSEAL, a permanently plastic gun-applied sealer for metal-to-metal joints. Together they form a positive, lasting seal against air, dust and moisture.

Through continuing research and development, Vibradamp is able to produce better sealing products for modern design. For full information and product samples, write Department A.

VIBRADAMP

VIBRADAMP CORPORATION, JACKSON, MICHIGAN
Producers of Sealers, Deadeners and Adhesives for
Industrial and Automotive Applications.



Rubber Tiles for Outdoor Use

Patio Tiles, a new resilient flooring made of Du Pont's *Hypalon* synthetic rubber, can be used outdoors on patios, terraces and porches without deteriorating under fluctuations in moisture and temperature. In addition to its weather resistance, the material is said to equal top-grade rubber and plastics in appearance, durability and ease of maintenance, and to surpass them in recovery from indentation and resistance to chemicals. The 9 by 9 by ⅛ inch tiles come in a terrazzo pattern in a choice of six colors. They can be installed outdoors on on-grade concrete with chemical setting cements. *Robbins Floor Products, Inc., Tuscumbia, Ala.*

(More Products on page 264)

Summitville Tiles Inc.

MEMBER • TILE COUNCIL OF AMERICA, Inc.

SUMMITVILLE

12-veneer

LARGE
UNIT

GLAZED CERAMIC TILE



GLAZED

QUARRY TILE

Frostproof tile perfect for store fronts, swimming pools, feature walls and decorative inserts.

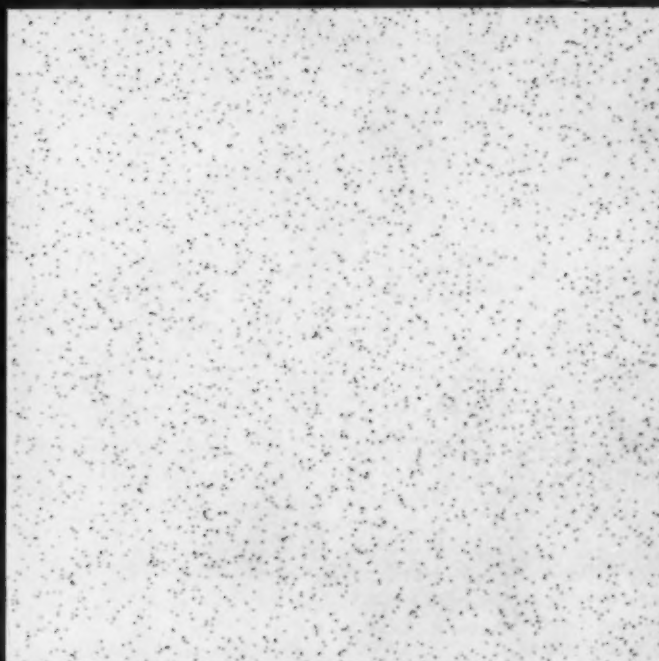
20 decorator colors. Sizes:

$2\frac{1}{4} \times 8 \times \frac{3}{4}$, $6 \times 6 \times \frac{1}{2}$,

$6 \times 6 \times \frac{3}{4}$, $3\frac{3}{8} \times 8 \times \frac{3}{4}$,

$3\frac{1}{2} \times 12 \times \frac{3}{4}$

and matching trim units.



11 $\frac{7}{8}$ "

12-veneer offers opportunities for unusual and dramatic concepts in design and decoration wherever interior tile are used.

This $11\frac{7}{8} \times 11\frac{7}{8} \times \frac{3}{8}$ tile is available in 20 decorator colors.

SPECIFY

Summitville

FIRST...TO LAST

QUARRY

TILE

Now 6 earth colors that harmonize with or compliment any color scheme. Scratch-proof, fireproof, acidproof.

Sizes: (red) $6 \times 6 \times \frac{1}{2}$, $6 \times 6 \times \frac{3}{4}$, $2\frac{1}{4} \times 8 \times \frac{3}{4}$, $3\frac{3}{8} \times 8 \times \frac{3}{4}$, $3\frac{1}{2} \times 12 \times \frac{3}{4}$, $6 \times 9 \times \frac{3}{4}$ and trim units.

Colors other than red: $6 \times 6 \times \frac{1}{2}$ and trim units.

No other product has all the outstanding features of Genuine Ceramic Tile. For all installations requiring beauty, durability under all conditions, versatility and minimum maintenance —specify Summitville Genuine Ceramic Tiles first... they last.

Full information is now available on all three superior Summitville products. Contact your local ceramic tile contractor or write direct to Summitville Tiles, Inc.

SUMMITVILLE, OHIO



50,000,000 Motor Vehicles spur demands for super-highways. Toll highways mean toll booths, gas stations, restaurants, motels and the like. View shows Tarrytown entrance to N. Y.

Thruway Toll Bridge across Hudson River opening day. Thruway and New Jersey's Garden State Parkway use Monel Roofing Sheet on booths and service buildings for long life at minimum maintenance.

Thruway buildings adopt Monel ...to lengthen roofing life...cut maintenance

Monel® nickel-copper alloy Roofing Sheet is stronger and tougher than any other non-ferrous roofing sheet. It resists atmospheric corrosion. It's immune to rust.

Another advantage of Monel alloy is its low thermal-expansion rate. It is less likely to crack under extreme temperature changes. It resists heat, as well as snow . . . ice . . . tearing winds. Stands years of flexing with no sign of fatigue.

Performance of Monel flashings, gutters, leaders, fascia and gravel stops

®Registered trademark

makes this nickel-copper alloy a trustworthy ally of architects, consultants, and engineers. Particularly those concerned with protecting clients from high maintenance costs.

Now is the time to specify Monel Roofing Sheet. It's a natural roofing material for parkway toll booths, gasoline stations, restaurants and service buildings of every type. We'll be glad to give you assistance with any specific job on your boards or in the field.

The International Nickel Company, Inc.
67 Wall Street New York 5, N. Y.



One of 40 utility buildings on the N. Y. Thruway, utilizing light-gauge Monel Roofing Sheet. Consulting Engineers: Madigan-Hyland, L. I. City, N. Y. General Contractor: Beacon Construction Company, Boston. Sheet Metal Fabricator: Columbia Cornice Company, Cambridge, Mass.



Nickel Alloys

Monel Roofing ... "for the life of the building"

FREE!

Specialized
Help on Fire
Alarm System
Specifications

Send me the free Flexalarm Fire Alarm System Planning Guide, F249.

Name.....Title.....

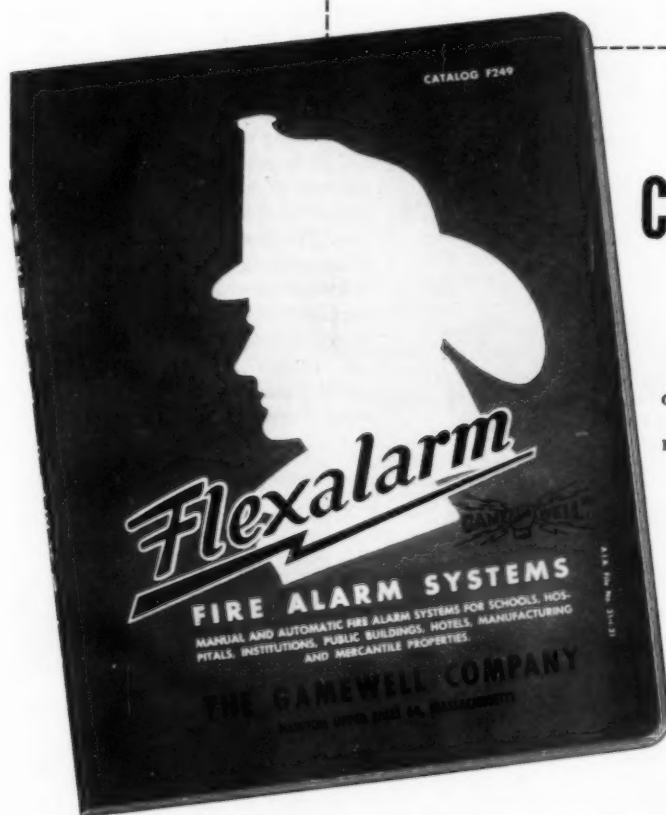
Firm.....

Address.....

City.....Zone.....State.....

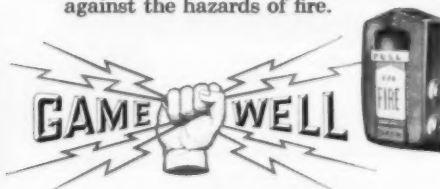
Send Coupon or write for Flexalarm F249 TODAY! And, we'll keep you informed on new developments and systems.

Mail to: The Gamewell Co., Dept. BB
Newton Upper Falls 64, Massachusetts

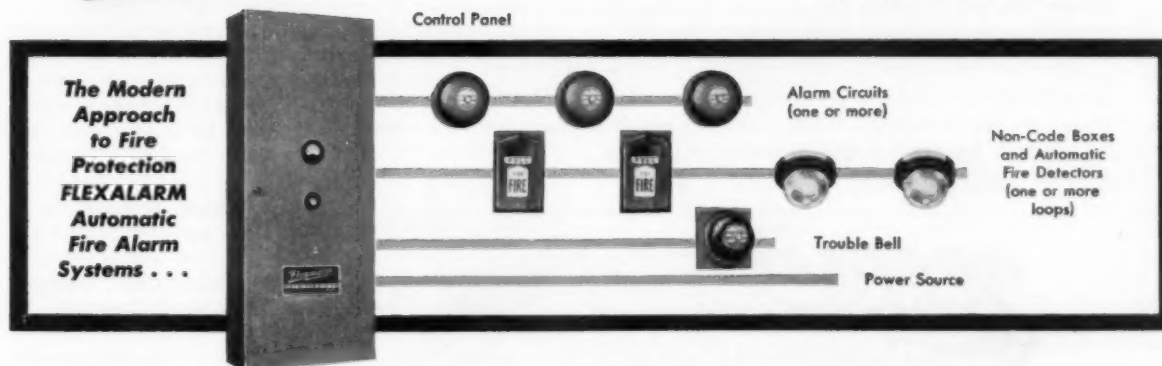


New Catalog for Architects and Engineers

Here's an advanced, easy-to-use technical digest on the design, application and specification of interior fire alarm systems. It features a new building-block concept based on Gamewell experience in signaling and communications. F249 includes suggested systems and layouts, gives you a complete one-source reference for planning the best possible protection against the hazards of fire.



THE GAMEWELL COMPANY
Newton Upper Falls 64, Mass.



New Cincinnati Schools Have Modern Sanitary Wash Fixtures, too



BRADLEY
Washfountains

- James N. Gamble Junior High School. Architects, Felsberg & Gillespie.
- Louis Schwab Junior High School. Architects, Elliston, Hall, McAllister and Stockwell.
- Robert A. Taft Senior High School. Architects, Tietig & Lee.

At left: Bradley Semi-Circular Wall-Type Washfountains located in classroom of James N. Gamble Junior High School.



James N. Gamble Junior High School

Robert A. Taft Senior High School

- In the design of these three latest Cincinnati school buildings, the best in modern wash fixtures were included.

Bradleys—in main washrooms, in corridors or alcoves, in classrooms, laboratories, art rooms—provide the maximum in sanitary, easy to clean washing facilities.

You will find more about the self-flushing bowls, convenient foot-control that eliminates faucets, how space is saved and other features in Catalog 5601, a copy of which is yours for the asking. **BRADLEY WASHFOUNTAIN CO.**, 2227 W. Michigan Street, Milwaukee 1, Wis.

BRADLEY
Washfountains

Distributed Through Plumbing Wholesalers



Write for
Catalog 5601

PRODUCT REPORTS

Longer-Lasting Ballast

The *ADVAN-guard*, an internal thermally actuated protective device, is said to add years to the life of fluorescent lamp ballasts by preventing their operation at too-high temperatures. Because the device is sensitive to temperature and voltage as well as current, it guards not only against internal ballast short circuiting, but also against many other factors contributing to abnormal ballast operating conditions.

The *ADVAN-guard*, which is sealed in the ballast housing, is designed to automatically "trip-out" whenever the fluorescent lamp ballast overheats. However, after allowing the heat to dissipate during a cycling period of 15 to 20 minutes, it resets automatically and the ballast resumes normal operation. To prevent unnecessary trip-outs while maintaining continuous protection, the ballast is permitted to operate at an increase of approximately 10 degrees before the *ADVAN-guard* goes into action. The protective device is also recommended to protect against violent failure at the end of ballast life in lighting installations where abnormal operating conditions do not occur. Rated life for *Advance* ballasts with *ADVAN-guard* protection is 10 to 12 years. *Advance Transformer Co.*, Chicago, Ill.



Porcelain-Faced Plywood Panel

Porc-Lin-Ply combines architectural porcelain-on-steel and plywood in a lightweight laminated building panel. Its face consists of 30 gauge, .012 porcelain enameled steel with a semi-matte finish in a wide variety of colors; the core is of 1/4 in. exterior grade plywood; and the sandwich is balanced, with a rust-resistant metal backing sheet that minimizes distortion and helps to protect the panel against moisture penetration. Available in 36 by 96 in. sheets, 5/8 in. thick, the panels are easily handled and can be cut on the job with power saws. *United State Plywood Corp.*, Weldwood Bldg., 55 West 44th St., New York 36, N. Y.

(More Products on page 268)

building design changes...



1935: Building Number 8
Gulf Research & Development Company,
Harmarville, Pa.



1957:
Production Research Building
Gulf Research & Development Company,
Harmarville, Pa.
Engineers & Constructors: Wigton-Abbott Corporation,
Plainfield, N. J.

but

KOPPERS COAL-TAR PITCH *is still the preferred roofing material*

The buildings at Gulf's Research laboratories trace in their design the architectural trends since the establishment of this activity in 1935. Building 8 is one of three original structures; the latest addition to Gulf's extensive research facilities is the Production Research building, designed by Wigton-Abbott and now nearing completion. Both have one thing in common: they are protected with 20-year Bonded Koppers Coal-Tar Pitch Built-Up Roofing.

All the flat-roofed buildings at Gulf's modern research center are covered with Koppers Bonded Roofing, including the new, staff-designed Nuclear Science building and the Automotive Products laboratory, widely acclaimed as a model of its type.

Proved protective ability is a prerequisite in the selection of a roofing material for research buildings

housing expensive equipment. That's why Gulf and its architects specified *coal-tar pitch*. And the excellent service record of the Koppers Roof on Building 8 during, *and beyond*, its 20-year bond period is typical of the long-lasting, trouble-free protection which only coal-tar pitch, with its unique waterproofing and "cold-flow" properties, can give.

Recommend Koppers Coal-Tar Pitch, the quality roofing material, to safeguard your client's investment. You'll find helpful specification information in our Sweet's Architectural File 12-B, 8a/Ko. The Koppers representative in your area can provide additional data and render valuable service. Koppers Company, Inc., Tar Products Division, Pittsburgh 19, Pa. District Offices: Boston, Chicago, Los Angeles, New York, Pittsburgh, and Woodward, Ala.



KOPPERS
COAL-TAR PITCH
BUILT-UP ROOFING

Alcoa Aluminum fabricated in **7 different ways** for Frank D. Whalen School



The versatility of Alcoa® Aluminum as a basic building material is clearly demonstrated by the ways it was used by architect and fabricator alike for Frank D. Whalen Jr. High School 135, Bronx, N. Y.

Albro Metal Products Corporation,

with its complete fabricating facilities, produced curtain walls for the facing; windows and doors and their frames; spandrels; covers for masonry; and ornamentation.

Such varied uses of aluminum fitted the architect's need for a light-weight, easy-to-handle material that required no maintenance, would last indefinitely and bring distinctive beauty to the contemporary

design. Exterior treatment is of aluminum paneling which blends with two-color brick.

These and other uses of aluminum are being followed throughout the country in the building of schools where its low first cost, elimination of maintenance, lower heating and cooling costs and a five per cent gain in usable floor space are but a few of the major advantages of this building material.

As with Albro Metal Products Corporation, Alcoa works closely with qualified fabricators on the engineering and design of wall systems and other applications of aluminum. Alcoa does not bid on these jobs.

And Alcoa architectural specialists are ready to work with you in the use of aluminum in building construction. There's a great deal of help available at your nearest Alcoa sales office. Or write Aluminum Company of America, 1888-G Alcoa Building, Pittsburgh 19, Pa.



Polishing aluminum door on moving belt at Albro Metal Products Corporation.



Welding two sections of aluminum windows together.



Owner: Board of Education of the City of New York, N. Y.,
William H. Corrales, Director of the
Bureau of Construction

Architect: Michael L. Radoslovich, AIA,
Chief Architect of the Bureau of Construction,
Board of Education, City of New York, N. Y.

General Contractor: Caristo Construction Corp.,
Brooklyn, N. Y.

Aluminum Subcontractor: Albro Metal Products Corporation,
Bronx, N. Y.



Albro milling machine routes out channel
for door hardware made of Alcoa Aluminum.

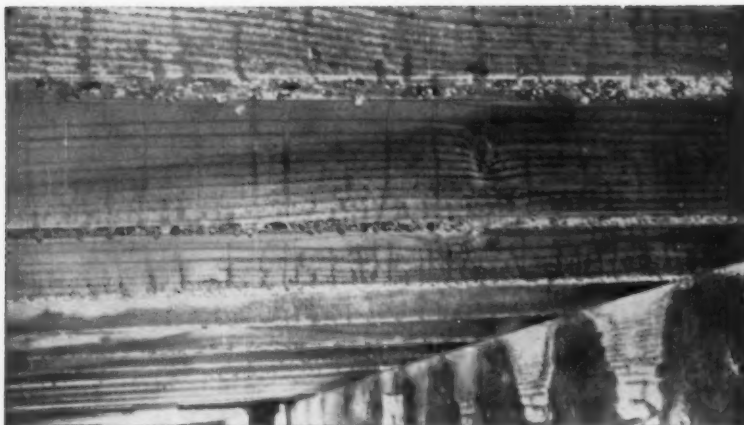


Your Guide
to the Best
in Aluminum Value



THE ALCOA HOUR

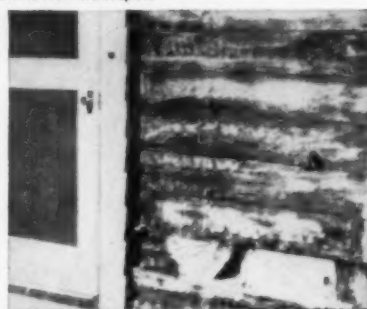
Television's Finest Live Drama
Alternate Sunday Evenings



Condensation on floor joints above a crawl space



Cracked plaster ceiling due to condensation on the inside of a flat roof deck



Condensation in the wall caused framing to decay and plaster to crack

Eliminate the ravages of excessive vapor

Rotting walls . . . blistering and peeling paint . . . masonry efflorescence (the white powder that forms on the outside of brick buildings) . . . warping and rotting wood floors and termite problems are just a few of the many evils we have learned to live with . . . all of them are directly or indirectly caused by excessive vapor condensation.

Governmental and academic research has proven that more than 80% of the moisture induced into the home is from the ground source. It makes little difference whether gravel is used under the basement, slab floor or crawl-space . . . or whether the site is on high or low ground, whether it's on a sand dune or a cess pool—somewhere below the structure water

exists and vapor will soon rise into the building. The only way to eliminate destructive moisture is in the original construction with the installation of "PRE-MOULDED MEMBRANE," the industries only TRUE vapor seal. In construction application the 4" x 8" sheets of "PREMOULDED MEMBRANE" are laid directly over the hard tamped grade or fill with a 6" head and side lap that is sealed with Sealright Catalytic asphalt . . . producing a monolithic vapor seal with mechanically sealed joints, that will expand and contract with the concrete slab above . . . without breaking the bond. "PREMOULDED MEMBRANE" has a permeance rating of only .0066 grains per square foot. We sincerely invite your comparison of "PM" against all other so-called vapor barriers on the market.

Write today for complete information and your set of "Tech-Tips."



SEALRIGHT
PRODUCTS FOR
BETTER CONSTRUCTION
W. R. MEADOWS, INC.

4 KIMBALL STREET
ELGIN • ILLINOIS

W. R. Meadows, Inc.
4 Kimball St., Elgin, Illinois

Gentlemen:

☐ Send me complete information and "Tech-Tips."

☐ Have representative call.

NAME _____ TITLE _____

FIRM _____

ADDRESS _____

CITY _____ STATE _____

see our catalog in

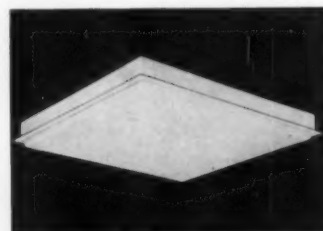


or write for copy

PRODUCT REPORTS

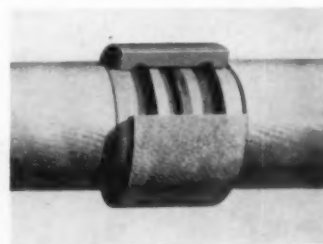
Colored Spandrel Glass

A new heat-strengthened spandrel plate glass will have ceramic colors fused onto the inner side of the plates in a selection of 16 standard colors and black and white. The $\frac{1}{4}$ in. plate glass units will be made under the trade name *Vitrolux* in maximum sheet sizes of 60 by 84 inches. Developed primarily for glass curtain wall construction, the spandrel glass is also expected to find effective use on store-fronts and for interior paneling. *Libbey-Owens-Ford Glass Co., 608 Madison Ave., Toledo 3, Ohio.*



Large Area Luminaires

Designed to provide high intensity shielded light for large areas, *Baylites* are square fluorescent fixtures available in models for recessed or surface mounting. Both the surface and recessed types are only three inches deep, and come in nominal sizes of 2 by 2 and 4 by 4 ft. They may be had with either plexiglas diffusers or $\frac{1}{2}$ in. *Polycube* shielding styrene louvers. *Electro Silb-A-King Corp., 1535 S. Paulina St., Chicago 8, Ill.*

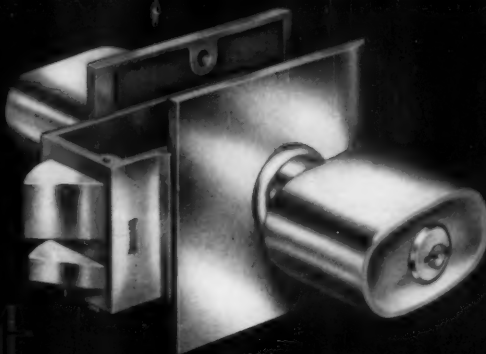


Asbestos-Cement Sewer Pipe

A new asbestos-cement sewer pipe features a specially designed coupling which is said to assure permanent infiltration-proof joints under external water pressures of up to 25 psi. Assembly of the *Fluid-Tite* coupling is a two-step operation involving only lubrication of the rubber rings and sliding the pipe into the coupling. Non-electrolytic and corrosion-resistant, the pipe is produced in diameters ranging from 6 to 12 inches. *Keasbey & Mattison Co., Ambler, Pa.*

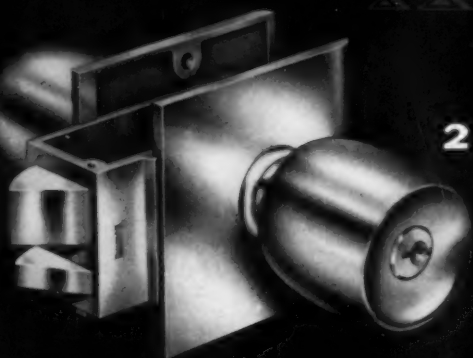
(More Products on page 272)

AERO DESIGN in cast brass,
bronze or aluminum.
Diameters: Knobs, 2-3/32" x 1 3/4".
Escutcheons, 3 1/8" x 3 1/4".



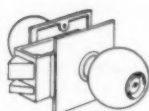
Client Appeal

2 new uniloc designs



TURBO DESIGN in cast brass,
bronze or aluminum.
Diameters: Knobs, 2-1/32"
Escutcheons, 3 1/8" x 3 1/4".

NEW STYLING plus the unique, unit-construction of Unilocs now offer you an exceptional opportunity to emphasize the extra care given to details in your planning. Unilocs are not ordinary locks in any sense of the word. Their conception is based upon the complete assembly of lock parts at the factory so that no disassembly is required for installation or removal. Thus all cramping or binding of parts is avoided—smooth action assured—and wear reduced to a negligible factor. Finishes available include: dull brass, polished brass, dull bronze, bright chromium, dull chromium and dull aluminum. Ask your Russwin representative to show you the new Turbo and Aero designs. Be sure to check and compare costs. Russell & Erwin Division, The American Hardware Corporation, New Britain, Conn.



MODERA DESIGN



BRISTOL DESIGN



MONO DESIGN

RUSSWIN
UNILOCs

A symphony in lock making

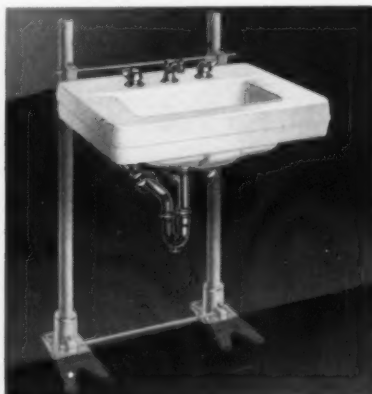
CRA



Versatile Crane Norwich Lavatory is available in different sizes, with or without 4½-inch back splash, with or without china or metal legs, and with a choice of fittings.



Norwich with integral liquid soap chamber. Holds 10 pints of soap. Keeps all washing within basin. Does away with slippery bar soap . . . wall-mounted dispensers. Note china leg.



Norwich mounted on concealed brackets. This model is ideal for faculty rooms as it looks "so homelike." Built-in chair carrier with concealed brackets gives positive mounting.



Dial-ese cartridge featured on all Crane lavatories. Easiest maintenance. All working parts in one low-cost cartridge. Replacement takes seconds—lasts years.

NE

*The
Preferred
Plumbing*

America's most versatile lavatory style!

How Crane's Norwich helps you standardize school plumbing

Now you can design school washrooms so all the lavatories look alike—no matter how many different problems you run into.

That's possible because Crane's Norwich lavatories come in different sizes—with or without 4½"-high back splash—with a choice of supply fittings—with or without china or metal legs. Seven beautiful colors plus white are available.

Yet because these fixtures are basically variations of one *model*, you don't have

to switch lavatory styles from wash-room to washroom. You get the same good-looking lavatory design (by famed Henry Dreyfuss) for the different applications. And even more important your school will be able to standardize cleaning and simplify maintenance.

Why not get the latest information on this ideal school lavatory—right away. Just call your Crane Branch or Crane Wholesaler. (In heating, too, specify Crane quality.)

CRANE CO. • 836 South Michigan Avenue, Chicago 5, Illinois

VALVES • FITTINGS • PIPE • PLUMBING • KITCHENS • HEATING • AIR CONDITIONING



EL RANCHO MOTEL,
HOT SPRINGS, ARK.

the
Space-Saving Advantages
and Inner-Fin®

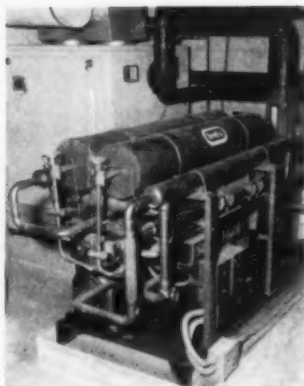
All Copper Construction of

a **heat-x** 'PC'

PACKAGE

CHILLER

Sold This Job



And this has been the experience of contractors all over the country. Customers are easily "sold" on these units . . . appreciate the sound advice of contractors who recommend them. Here's why:

SPACE SAVING — Patented Inner-Fin® construction makes Heat-X 'PC' Package Chillers the most compact on the market.

RELIABILITY — Non-ferrous construction of all water passages eliminates danger of corrosion. Traditionally rugged Heat-X construction assures long life.

'PC' Chillers also offer the contractor several advantages (in addition to consumer satisfaction):

EASE OF HANDLING — Units are lighter in weight and smaller because Inner-Fin® construction permits more chilling capacity with less bulk.

EASE OF INSTALLATION — Units are completely "packaged" . . . require only water and electrical connections.

'PC' Package Chillers are available in 2 HP through 100 HP models. Request complete catalog.

HEAT-X, Inc.

A Subsidiary of Dunham-Bush, Inc.

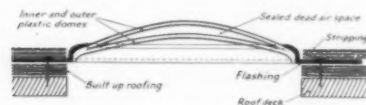
BREWSTER • NEW YORK

PRODUCT REPORTS



Double-Domed Plastic Skylight

To reduce heat transmission while providing a high level of diffused natural light within a building, the new *Consolite Double Dome* skylight is made up of twin bubbles of fiberglass-reinforced polyester plastic with a dead air space between the inner and outer shells. This "thermos bottle" construction cuts the U-factor to .5, giving the skylight approximately the same insulating value as a 2½ in. gypsum roof, and at the same time eliminates condensation. The double thickness of polyester resists shattering and will support a dead load of 220 lbs per sq ft. Tensile strength is 10,000 psi; flexural strength, 20,000 psi. Available in sizes ranging from 18 to 74 inches across, the *Consolite* units come in square, round or rectangular shapes, and three basic models — self-flashing, curb-mounting and bond-type. *Resolite Corp.*, Zelienople, Pa.



Forced Circulation Boiler

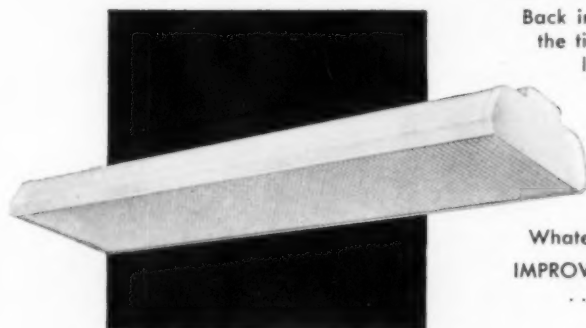
The recently introduced International LaMont *Thermojet* forced circulation boiler brings the advantages of high temperature water heating within reach of single buildings by making temperature differentials of as much as 80 degrees F. practical for low pressure systems. With this higher temperature differential, the volume of water in a system is reduced, with accompanying reductions in the size of the circulation pump and of the pipe required for distribution and return lines. In addition, fuel and operating economies result from the more effective use of available heat. The *Thermojet* boiler can be used efficiently for both low and high pressure and temperature operation. In the 2,000,000 Btu/hr capacity, it is 4 ft high, 4 ft wide and 10 ft long, and has a design pressure of 900 psi, making water temperatures of 500 degrees F. available. *International Boiler Works Co.*, East Stroudsburg, Pa.

(More Products on page 276)

**KEEP YOUR EYE
ON THE FUTURE**



Specify the **NEW GUTH FUTURLITER**
it puts you "light years" ahead!

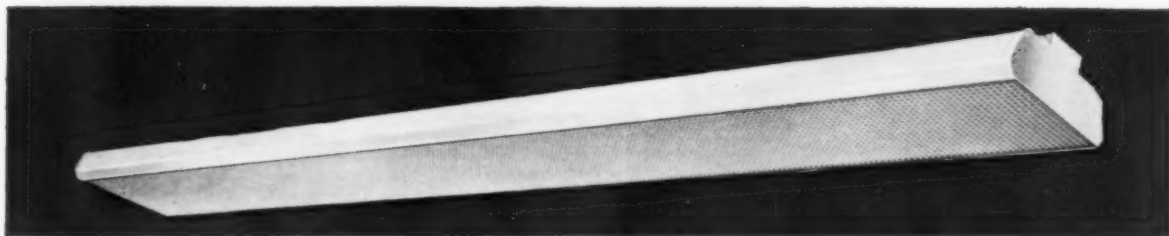


Back in a new functional dress, Guth Futurliter breaks through the time barrier of illumination planning. You meet today's lighting requirements and anticipate tomorrow's needs, with Futurliter's "flexible footcandle package."

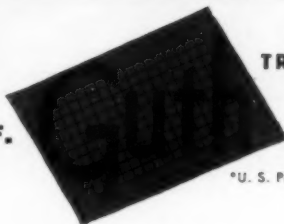
Install two rows now . . . add a third lamp later, in the same fixture. Still later, you can add more Futurliters between units installed now . . . or complete third and fourth rows!

Whatever footcandle flexibility you want—Futurliter delivers. IMPROVED LOUVERING AND DIFFUSING MEDIA AVAILABLE . . . with famous GrateLite Louver Diffuser*, cross baffles, glass bottoms, and others.

Choice of 4' and 8' lengths available for 100% downlighting, or combination up-and-down lighting, for pendant or close-ceiling mountings. Write for complete data.



THE EDWIN F.



TRUSTED NAME IN LIGHTING SINCE 1902

COMPANY • ST. LOUIS 3, MO.

*U. S. Pat. No. 2,745,001 Can. Pat. 1957, No. 538,245



This"man **assures**

The Quality Verification Program conducted by "the man in the white coat" is a continuing program of checking and inspection of member-company joist manufacturing processes and materials. This program is administered for the SJI by a nationally known testing laboratory. In the photo above, the inspector is measuring accuracy of fabrication at several points along the length of a Truscon "O-T" Steel Joist, Short-Span Series.

REPUBLIC



World's Widest Range of Standard Steels

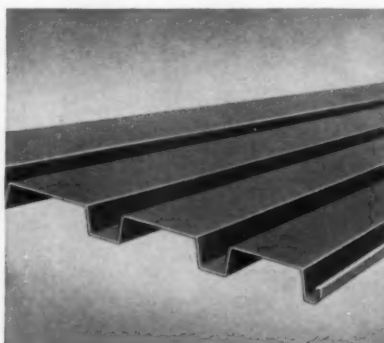
in the white coat"

Truscon steel-joist dependability

Thorough inspection on an unscheduled basis protects the integrity of the Steel Joist Institute Seal of Approval. It's another safeguard to assure you predictable and dependable load-bearing. Don't take chances with just any joist. Specify Truscon® "O-T"® (Short-Span) Steel Joists, manufactured according to the standards of the Steel Joist Institute and fully qualified to bear this seal . . .



TRUSCON SELF-SENTERING® LATH is quickly placed atop steel joists to center and reinforce concrete floors and roofs. Truscon Self-Sentering Sheets are a full 29 inches wide to decrease required laps and speed erection. Hundreds of "keys" per square foot effectively grip the concrete. The result is true and dependable tensile reinforcing—and fire-safe construction. Send coupon for facts on the more than 40 different types of Truscon Metal Lath and Accessories.



NEW! 24-INCH-WIDE TRUSCON FERROBORD®. Truscon Ferrobord Steeldeck now is available in a new design. The new size comes in lengths up to 32 feet, 6 inches. It roofs large areas quickly. Straight lay means that several crews can roof without delay. All work is done from above—Ferrobord is quickly welded to top chord of joists or purlins. Lap joints make smooth surface for insulation and waterproofing. Twenty-four-inch Ferrobord is light, strong, fire-resistant. Available now. Send coupon for specifications.



THE BEST COSTS LESS INSTALLED. Republic **ELECTRUNIT® E.M.T.**—the original lightweight rigid steel raceway—provides true electrical flexibility . . . and economy. When specified in ample sizes, it provides a safe, grounded, pull-in, pull-out wiring system that makes circuit-changing a cinch. **ELECTRUNIT E.M.T.** is "Inch-Marked"® and "Guide-Lined" for easy, accurate installation. It is approved by the National Electrical Code for exposed, concealed and concrete applications. See your electrical contractor or send coupon for more facts.

STEEL

and Steel Products

REPUBLIC STEEL CORPORATION

DEPT. C-3813

3110 EAST 45th STREET, CLEVELAND 27, OHIO

May I have more facts on the Republic products checked?

- ☐ "O-T" Steel Joists ☐ Truscon Metal Lath
☐ Quality-Verification Program ☐ ELECTRUNIT E.M.T.
☐ 24-Inch-Wide Truscon Ferrobord

Name _____ Title _____

Company _____

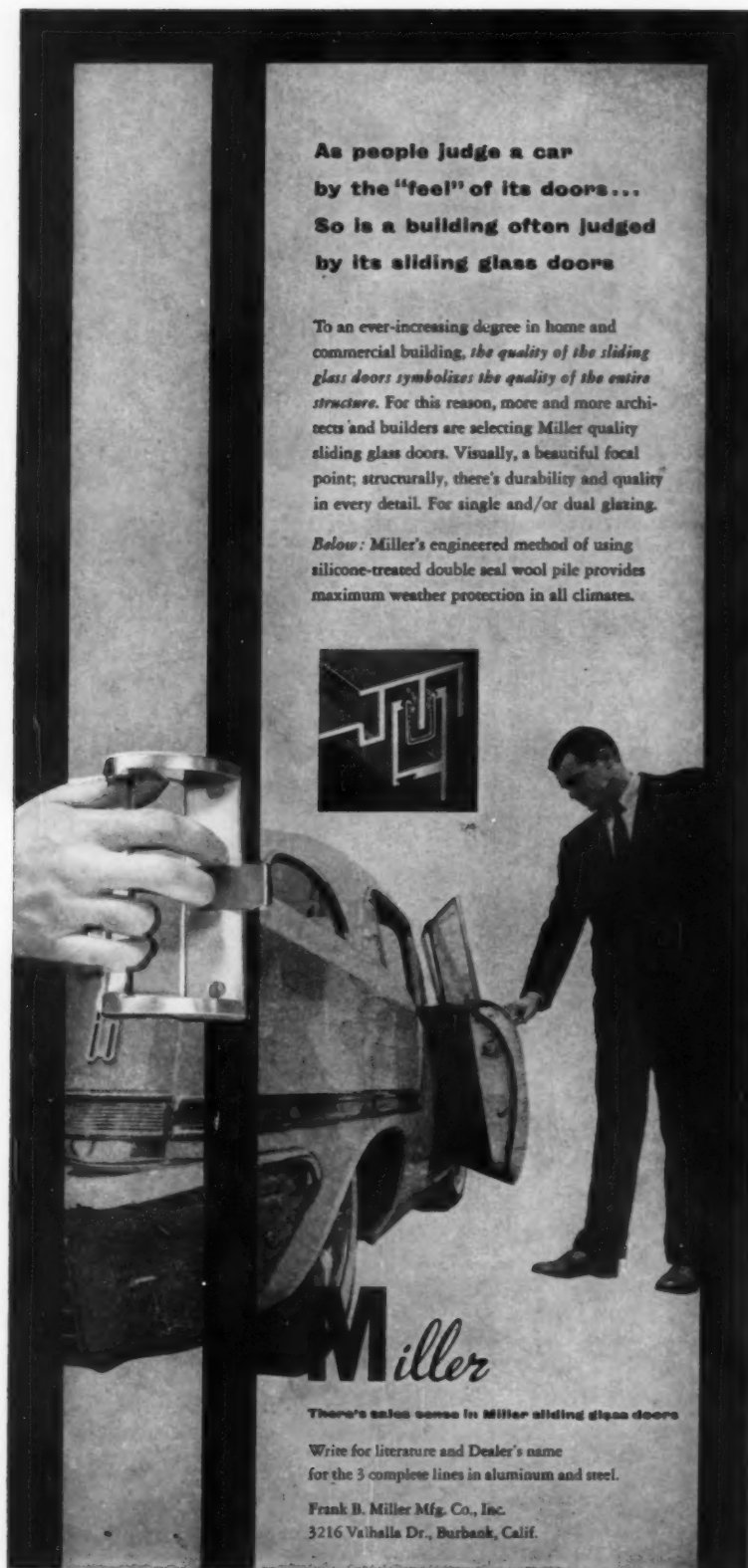
Address _____

City _____ Zone _____ State _____

**As people judge a car
by the "feel" of its doors...
So is a building often judged
by its sliding glass doors**

To an ever-increasing degree in home and commercial building, *the quality of the sliding glass doors symbolizes the quality of the entire structure.* For this reason, more and more architects and builders are selecting Miller quality sliding glass doors. Visually, a beautiful focal point; structurally, there's durability and quality in every detail. For single and/or dual glazing.

Below: Miller's engineered method of using silicone-treated double seal wool pile provides maximum weather protection in all climates.



Miller

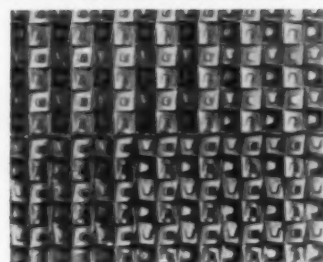
There's sales sense in Miller sliding glass doors

Write for literature and Dealer's name
for the 3 complete lines in aluminum and steel.

Frank B. Miller Mfg. Co., Inc.
3216 Valhalla Dr., Burbank, Calif.

Member of Sliding Glass Door & Window Institute

PRODUCT REPORTS



Patterned Metal Panel

The new **RIGID-TEX** metal pattern shown above is designed in a 48" width for such architectural applications as exterior curtain walls and interior paneling. Because it strengthens the metal both vertically and horizontally, and has no obvious repeats, it is particularly suitable for large surfaces. Pattern 1-RL is available in all metals and colors. Maximum gage is .062 in. and maximum pattern depth is .073 in. *Rigidized Metals Corp., 685 Ohio St., Buffalo, N. Y.*



**Sound-Powered Electric
Telephones**

To meet the need for direct "private wire" communication between frequently called points of contact, a desk telephone unit has been developed that operates independent of the regular intercom system or office switchboard, without batteries or outside power source. The current necessary for voice transmission is generated by the voice itself through an electro-magnetic unit, and ringing signals are also transmitted by self-generated electric current. Designed for use in offices, the new Executive Cradle-Type desk sets are similar in appearance and manner of operation to standard telephone or intercom equipment. Because the instruments are limited to communication with a maximum of two other stations, they are intended to supplement rather than to replace standard communication equipment. They are also valuable for emergency service in the event of regular system power failure. *Wheeler Insulated Wire Co., Inc., Waterbury, Conn.*

(More Products on page 280)

another

**VICRTEX
VEF**

INSTALLATION

DWOSKIN, INC.

helps Atlanta's

GRADY MEMORIAL HOSPITAL

prepare for a useful and
attractive life with

VICRTEX V.E.F. WALL COVERINGS

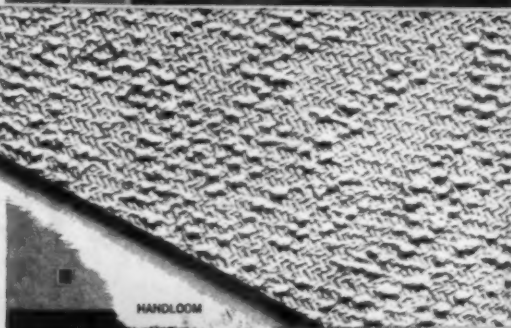


No cold laboratory look for this hospital. Vicrtex' softly glowing colors, deep textured surface will cheer and interest patient and visitors alike . . . yet maintenance will never be a problem.

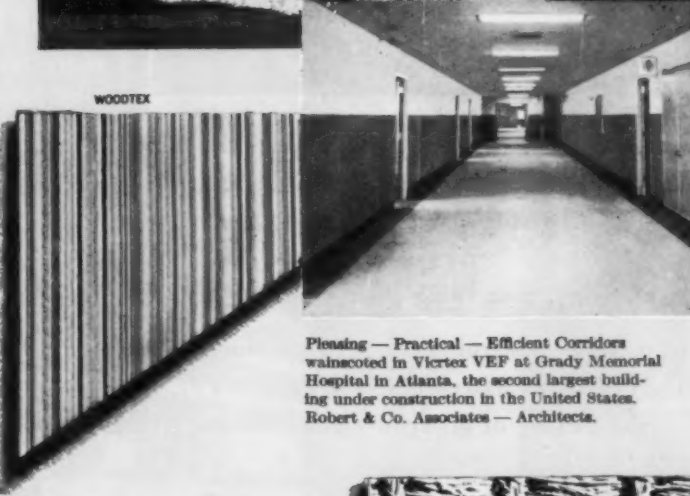
Used as wainscoting in the many corridors, Vicrtex VEF Hand Loom, Safari and Woodtex will never show stains from anxious hands . . . marks from hurriedly wheeled carriages . . . the discolorations of time. And in the nurses' stations dainty Princess Vicrtex VEF adds a feminine, yet serviceable, touch.

There's extra cheer here too, that can't be seen . . . in the time saved than can be devoted to more important tasks, because Vicrtex is so easy to care for . . . in the money saved because Vicrtex is so long lasting.

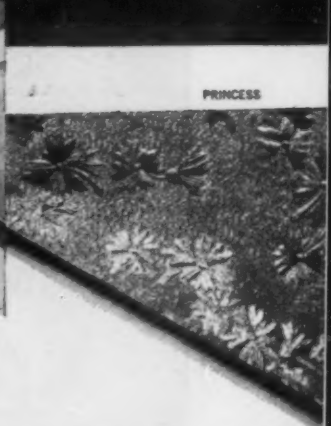
Plan practically, efficiently and economically . . . attractively, colorfully and interestingly . . . with Vicrtex VEF for both wall coverings and upholstery. Choose as Robert & Co. Associates did . . . as many famous architects do . . . from Vicrtex's many original tri-dimensional and textured patterns . . . in a wide range of colors. Write TODAY for Vicrtex VEF "Walls of Fame" brochure, samples and prices.



HANDLOOM

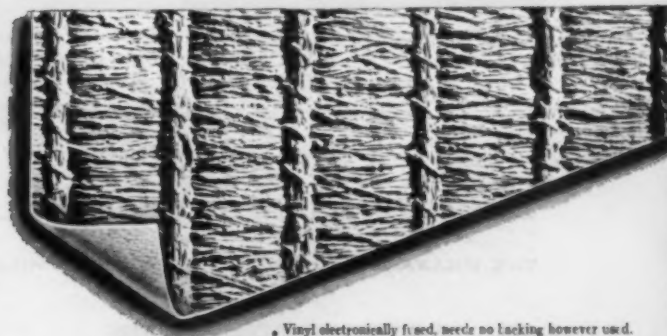


WOODTEX



PRINCESS

Planning — Practical — Efficient Corridors wainscoted in Vicrtex VEF at Grady Memorial Hospital in Atlanta, the second largest building under construction in the United States. Robert & Co. Associates — Architects.



SAFARI



L. E. CARPENTER & COMPANY, INC.

Sales Office: Empire State Building, New York 1 • Longacre 4-0080

Mills: Wharton, New Jersey

* Vinyl electronically fused, needs no tacking however used.

The Big Dome

the *jewel box

New Alexander Memorial Coliseum, Georgia Technical Institute, Atlanta, Georgia, seating 7,040. Architects: AECK ASSOCIATES, Atlanta, Georgia.

In common with this beautiful tournament floor, 15,000 of the nation's finest gym floors are today protected by Hillyard finishes.



and the *jewel



"FINISH FOR CHAMPIONS"

Wears twice as long as any other finish.

Preserves original beauty of the floor, prevents rubber burns and rubber marking.

Is light in color — allows spectators and players alike to see plays clearly (live or televised).

Is non-glare, slip-resistant for faster, safer big-time play.

Modern functional design beautifully illustrates the principle that the floor is the most important element of the building. The "Big Dome" at Georgia Tech serves to shelter the floor and those using it or watching it.

Architectural masterpieces demand the finest Basketball playing surface—Hillyard TROPHY, the Tiffany of all Gym Floor Finishes.

Call on your nearby Hillyard Maintainer® as your skilled consultant on all problems of floor treatment specifications—as your Job Captain during construction. Write Hillyard for his name and address. Remember, he is "On Your Staff, Not Your Payroll."

Dept. AR-2

St. Joseph, Mo.

Passaic, N. J.
San Jose, Calif.



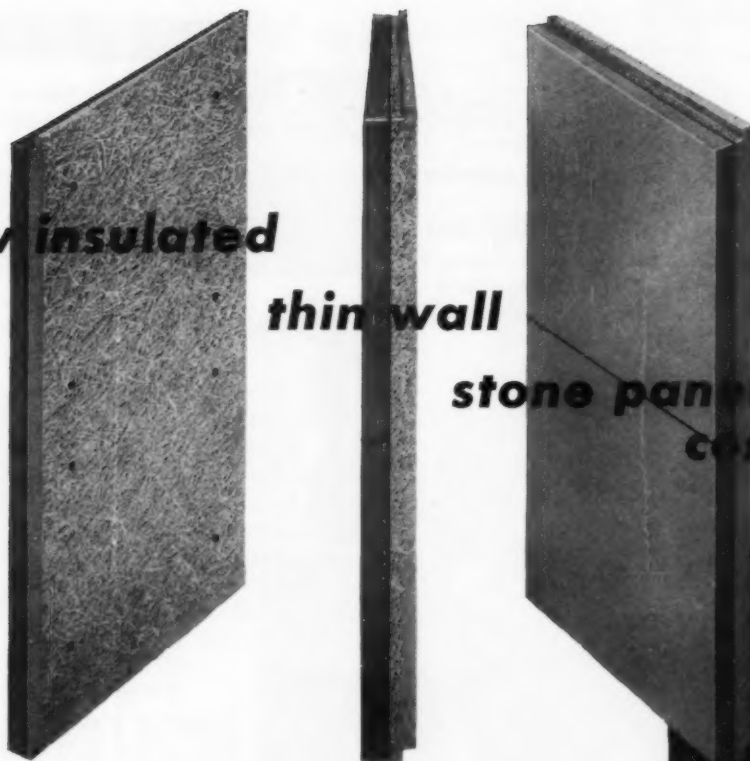
Branches in Principal Cities

THE HILLYARD MAINTAINER BRINGS YOU HILLYARD'S 50 YEARS OF EXPERIENCE AND LEADERSHIP

new insulated

thin wall

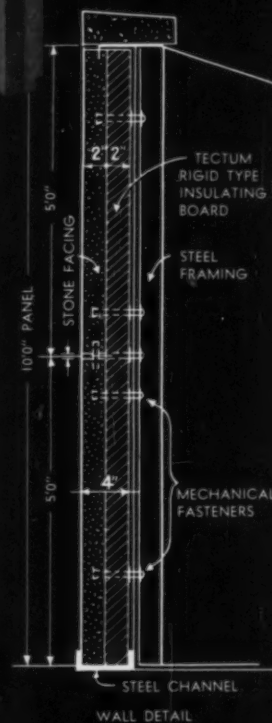
stone panel construction



**... for curtain wall construction
applied to structural steel or masonry**

This new stone panel construction using two or three pieces of stone as a unit can be quickly fastened by strap anchors or dowels into the wall. Thickness: two inches Indiana Limestone and two inches light weight, rigid type insulating board. Uniform panels permit erection at record speeds—up to 1200 square feet per day being achieved on one recent project.

Mail coupon today for complete information.



**INDIANA LIMESTONE
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BEDFORD, INDIANA

*Founded 1932 as a service organization
for the Architect and Contractor.*

INDIANA LIMESTONE INSTITUTE
Dept. AR-77, Bedford, Indiana

Please send illustrated bulletin on new thin wall stone panel construction.

NAME _____
FIRM _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____



IS *Top Quality*
(AND UTMOST SAFETY)

WORTH AN EXTRA \$25.00?

Joseph L. Eichler, prominent California builder, estimates the extra cost of installing the finest wiring devices, as opposed to ordinary devices, at about \$25.00 (per 7-room house)



No. 1101

AC Quiet Switches . . . dependable, long life, plus quiet action and unobtrusive good looks.



No. 9690

Duplex Convenience Outlets. Rugged construction plus smart appearance. Easy to install—trouble-free operation.

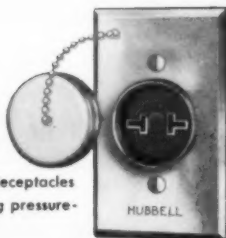


ARCHITECTS: A. Quincy Jones & Frederick E. Emmons
Los Angeles, Calif.
ELECTRICAL CONTRACTOR: Jones Electric Company, Inc.
Hayward and Sunnyvale, Calif.
BUILDER: J. L. Eichler & Sons, Palo Alto, Calif.



No. 5252

3-wire Duplex Receptacles. Accommodate 3-wire caps with U-shaped grounding blade, OR conventional 2-wire parallel blade caps.



No. 7792

Outdoor Weatherproof Flush Receptacles. Double T-slots, brass plate, snug pressure-fit cover.

What a small price for your residential customers to pay for the peace of mind that is theirs when they are assured of utmost wiring device safety and long-time dependability. As Mr. Eichler, leading builder of quality homes throughout California, goes on to say, "We have found that the use of quality products in our homes results in better sales, lower cost maintenance and customer satisfaction. We have used Hubbell devices in over 2,000

of our homes and experience has proven that quality devices are lowest in cost to install and service."

We feel sure that you, too, will attest the good sense of the above and the fact that Hubbell represents the finest quality obtainable.

A free booklet on the subject of Hubbell residential wiring devices is available on request.

HARVEY HUBBELL INC.

**Bridgeport 2,
Connecticut**

QUALITY WIRING DEVICES

PRODUCT REPORTS

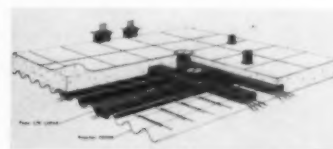
One-Piece Shower Installation

The *Hydapipe*, a one-piece unit for exposed or surface-type shower installations, comes with valve, shower head, supply risers and head supply all mounted together. The piping is enclosed in chrome-plated, heavy-gage brass sheathing that is easily mounted on the wall and requires only the hot and cold connection. *Symmons Engineering Co.*, 445 C Street, Boston 10, Mass.



Packaged Power for School Labs

Lab-Voll, a packaged power unit designed for high school physics and science laboratories, can be mounted singly or in pairs in each individual laboratory table to supply low voltage AC and DC current for experiments, without a central power panel. Up to 2 amps at 12 volts, AC or DC, and 10 amps at 115 volts are available. A variable control on the front panel permits students to change the output for any experiment. *Buck Engineering Co., Inc.*, Freehold, N. J.

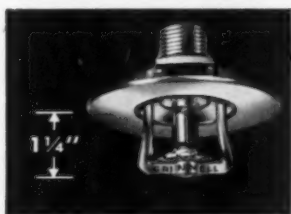


Electrified Concrete Floors

When used between conventional *Cofar* cells as shown above, Type E-R (for "electrically ready") *Cofar* cells provide complete electrification for reinforced concrete floors. The new units, which are wide troughs capped to form raceways for electrical and telephone wires, come in 1, 2, and 3-cell sizes. Spacing between them can be varied according to the amount of electrification desired. To eliminate concrete drilling when service outlets are moved, the units are available with pre-set inserts. *Granco Steel Products Co.*, 6506 N. Broadway, St. Louis 15, Mo.

(More Products on page 284)

The BEAUTY of Grinnell *Flush-Type*



Ceiling Sprinklers

By planning your fire protection in the blueprint stage, you not only get the most efficient protection, but a system that *harmonizes* with interiors.

Because the Grinnell Ceiling Sprinkler only protrudes 1 1/4" below the ceiling and is available in a variety of finishes and colors, it is the ideal sprinkler for offices, shops, stores, restaurants, lounges, country clubs. It gives reliable, unobtrusive fire protection.

Grinnell Company, Inc., Providence, Rhode Island — manufacturing, engineering and installation of automatic sprinklers since 1878.



GRINNELL
FIRE PROTECTION SYSTEMS



Box No. 5860



We are furnishing
Mail Chute Equip-
ment for many col-
lege buildings—
Dormitories, Labo-
ratories, Hospitals,
Museums, Office
and Administration
Units.

The University of
Michigan has ten
Cutler Installations.



• It's a friendly hand that extends Dur-O-wal... the patented steel reinforcing for masonry walls. Dur-O-wal widens the horizon of masonry design, assures lasting, flawless beauty in masonry walls. Available everywhere.



Rigid, custom-designed Dur-O-wal prevents cracks.

MORE THAN 8,000 DEALERS

to supply you

Trussed Design

Butt Weld • Deformed Rods

DUR-O-WAL

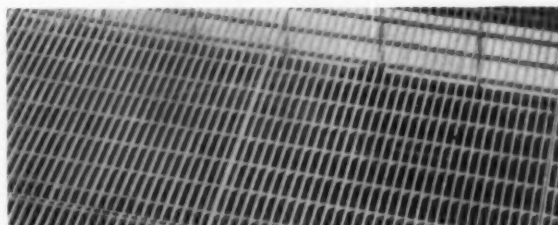
Dur-O-wal Div., Cedar Rapids Block Co., CEDAR RAPIDS, IA. Dur-O-wal Prod., Inc., Box 628, SYRACUSE, N.Y. Dur-O-wal of Ill., 119 N. River St., AURORA, ILL. Dur-O-wal Prod. of Ala., Inc., Box 5446, BIRMINGHAM, ALA. Dur-O-wal Prod., Inc., 4500 E. Lombard St., BALTIMORE, MD. Dur-O-wal Div., Frontier Mfg. Co., Box 49, PHOENIX, ARIZ. Dur-O-wal, Inc., 165 Utah St., TOLEDO, OHIO

You get those

**"WIDE
OPEN
SPACES"**

indoors!

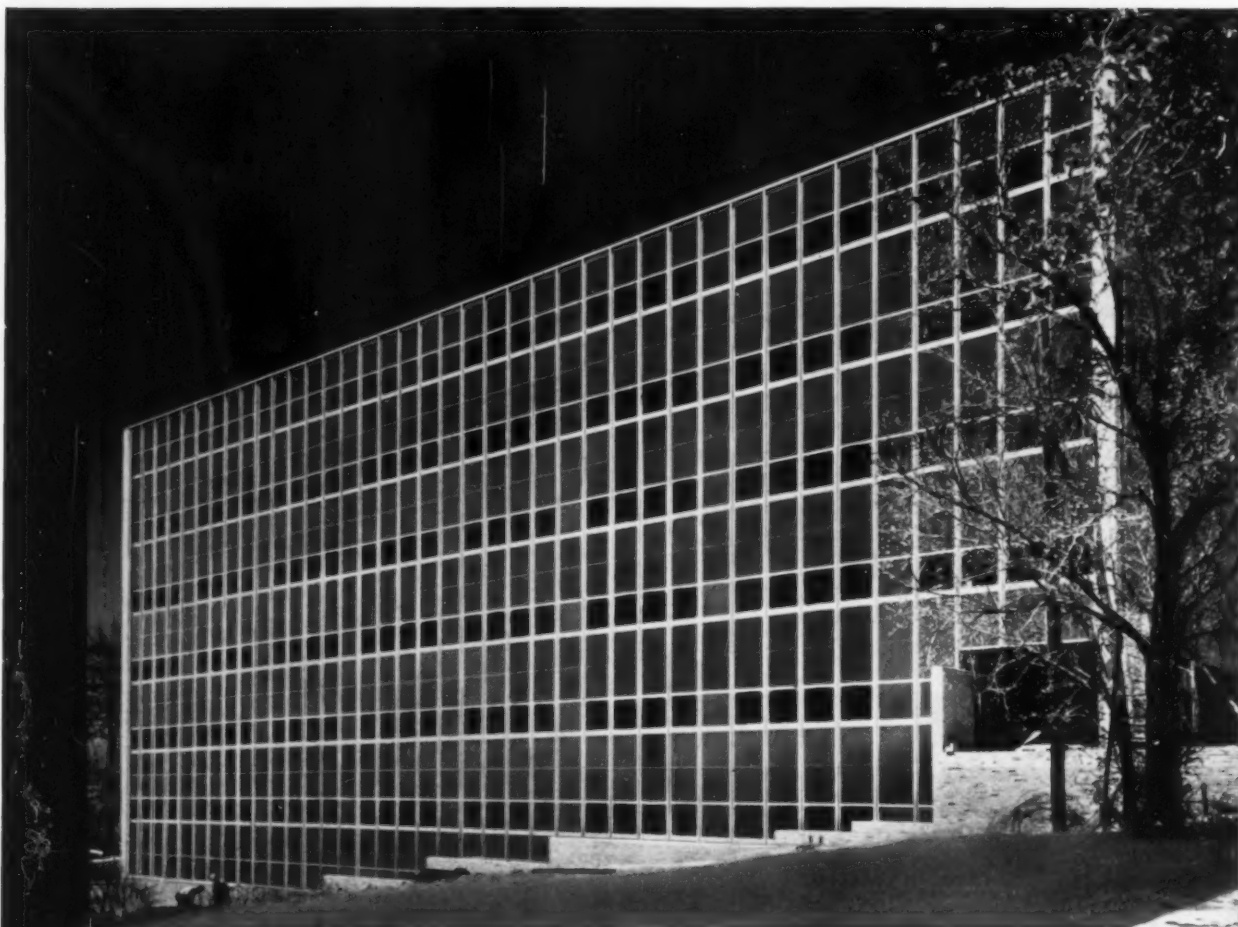
HERE's a grating that has the strength and rigidity to bear the brunt of heavy indoor traffic yet provides 90% open area for the passage of light and air! Hendrick Mitco is specified by architects for flooring or walkways because it takes the beatings of heavy usage yet "keeps on the level"... doesn't bend or warp. Made by forcing rectangular square-edged steel bars into integral panels under hundreds of tons of hydraulic pressure, Hendrick Mitco affords maximum strength... minimum attention.



HENDRICK
MANUFACTURING COMPANY

38 Dundaff Street, Carbondale, Pa.

Perforated Metal • Perforated Metal Screens • Wedge-Slot Screens • Architectural Grilles • Mitco Open Steel Flooring • Shur-Site Treads • Armorgrids • Hydro Dahazers • Petrochemical Column Internals



A monument to the beauty and functional design achieved with Ceco Curtainwall is the Meramec Building, Clayton, Missouri. Architects Benjamin Shapiro and Robert Tisdale and Contractor Manuel Lasky obtained this effect with Ceco Aluminum Projected Windows and porcelain panels.



Palms Shopping Center, Houston, Texas
Irving L. Klein, Architect.

What to look for and look out for in Curtainwall construction:
It is especially important to make proper allowance for expansion and contraction of metals. Windows and caulking must move together with expansion and contraction to ensure a tight seal. Part of the solution is in engineering know-how and part in the right choice of caulking materials. There must be proper structural design of window-wall mullions to meet varying wind load conditions. There must be adequate anchorage of the wall to the skeleton of the structure. Panel installations must be weather-tight.

FOUR FREEDOMS

Ceco Curtainwall
Construction Gives You
Freedom of Originality
... Flexibility... Versatility
... Utility

Every architect wants to design a structure that bears the unmistakable stamp of his creative ability.

There's an unbeatable team that can help you realize that ambition: *Curtainwall* . . . the modern miracle in building—and *Ceco*, for 45 years a leader in the engineered building-products-and-service industry.

Curtainwall by Ceco offers architects the greatest opportunity for unlimited use of color and pattern. The reason is simple. Ceco offers you *either* aluminum or steel sections. Couple that with your choice of panels in stone, marble, glass or coated metals . . . and you find you have the widest possible range to stimulate your creative urge.

With Curtainwall the exterior surface of the structure is precision built in the factory . . . tailored to your design. And Ceco Curtainwall is tailored to your budget, engi-

neered to save materials and construction time. All this means early building occupancy, permitting client-invested dollars to start paying dividends faster. Then too, Curtainwall provides 4 to 6% more floor space for use or rental.

So, call on Ceco . . . a company honored not only as a Curtainwall supplier but also for its pioneering in floor and roof framing. Here Ceco's unique background will assist you to obtain the best structural Curtainwall. For among Curtainwall suppliers only Ceco has experience in floor and roof construction—to which all Curtainwalls must be properly anchored. So Ceco can best coordinate your Curtainwall with your structural plans. Ceco Steel Products Corporation—general offices: 5601 West 26th Street, Chicago 50, Illinois—offices, warehouses and fabricating plants in principal cities.

IN CONSTRUCTION PRODUCTS CECO ENGINEERING MAKES THE BIG DIFFERENCE

Windows, Screens and Doors / Ceco-Meyer Steelforms / Concrete Reinforcing / Steel Joists / Metal Roof Deck / Metal Lath

HERE ARE TYPICAL CECO HIGH-RISE AND CURTAINWALL BUILDING INSTALLATIONS:



Amoco Building, New York, New York
Emery Roth & Sons, Inc., Architects.



Harbor View Apartments, Chicago, Illinois
Irwin G. Fredrick, Architect.



Phillis Wheatley Elementary School, New Orleans, Louisiana
Charles R. Colbert, Architect.

PRODUCT REPORTS



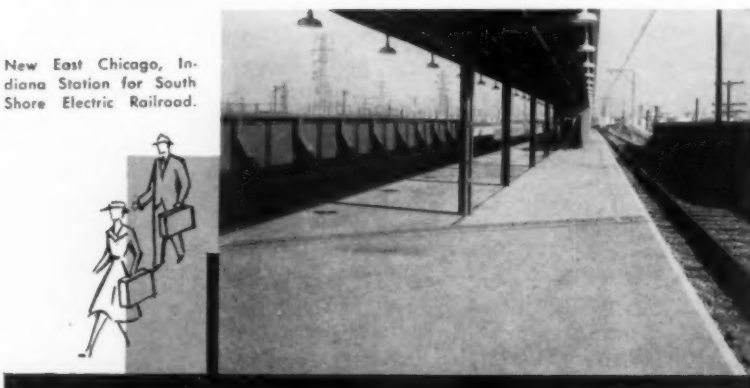
SAARINEN PLACES FURNITURE ON A PEDESTAL

Prodded by a longstanding desire to "clear up the slum of legs in our rooms," Eero Saarinen has designed for Knoll Associates a series of chairs and tables whose molded plastic seating shells and round or oval tops are supported on a lone aluminum pedestal. So skillfully are they blended with their bases that, after the initial shock of unfamiliarity, the one-legged furniture has evoked lyrical comparisons to stem wine glasses — and even tulips.

In developing his designs Saarinen sought to replace the "ugly clutter of cages and legs going in different directions" with a more restful atmosphere, a goal that has been pursued even to the point of equipping swivel chairs with a special device that automatically returns the seat to its proper position, banishing the sloppiness of empty chairs turned helter-skelter. The air of repose is further reinforced by the neutral tones (white, beige, gray and black) chosen for the main elements. Accents are introduced only by the colors of the upholstered foam rubber seat cushions.

The essential simplicity of the designs adds another dividend too. Because its production involves only three component parts, the furniture can be offered at a relatively low cost. And its "live-ability" has been predetermined by a trial run in the living and dining rooms of Saarinen's own house, prior to more scientific testing.

New East Chicago, Indiana Station for South Shore Electric Railroad.



Frances Cabrini Extension Project, Chicago.



The present series — side chairs, arm chairs and swivel chairs; a large dining table, coffee tables and side tables in both round and oval shapes — will be introduced to the market in September, the first installment in a larger program. Next on the agenda are complementary sofas and lounge chairs. *Knoll Associates, Inc., 575 Madison Ave., New York 22, N. Y.*



(More Products on page 288)

all-weather WALKING SAFETY for cement floors, stairs and ramps

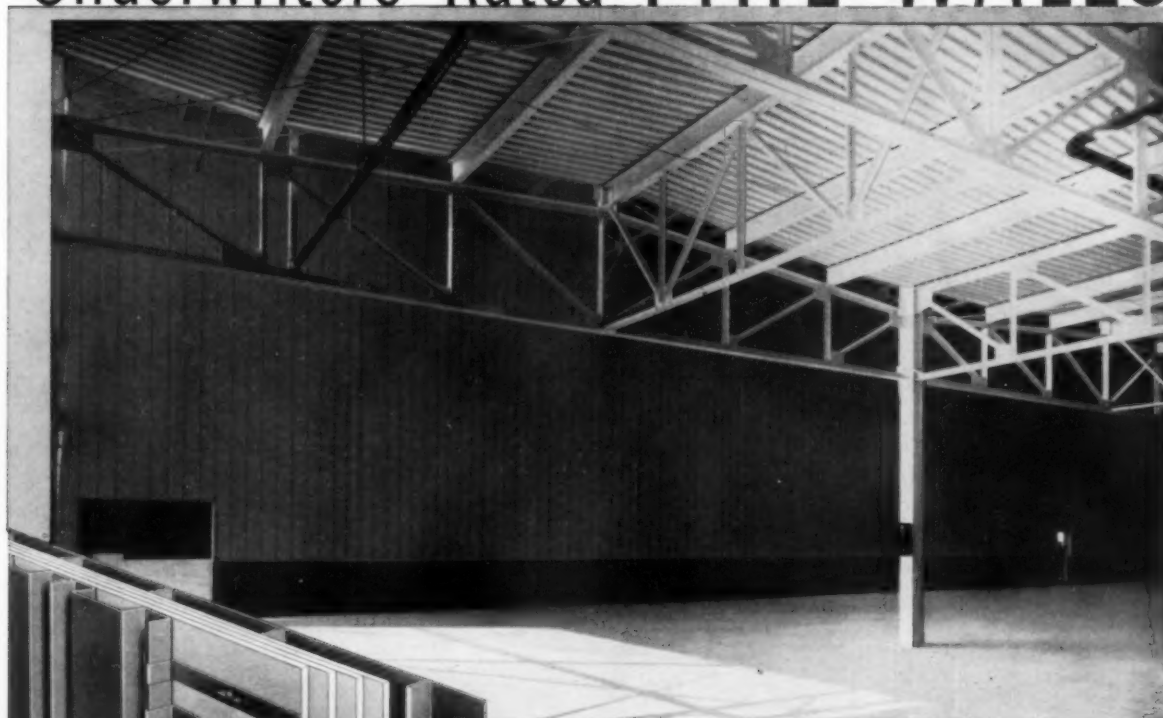
ALUNDUM (c.f.) Aggregate incorporated in cement or asphalt floors, stairs and ramps, in the correct proportions, provides a permanently non-slip surface — unimpaired by water, oil or similar conditions. It also acts as a reinforcement for the cement, greatly increasing its durability. For maximum walking safety and permanence, specify ALUNDUM (c.f.) Aggregate.

For complete information including suggested specifications, see our catalog in Sweet's or write for form 1935-R.



NORTON COMPANY
WORCESTER 6, MASS.

Underwriters' Rated FIRE WALLS



...for Interior or Exterior Use!

Mahon Underwriters' Rated Metalclad Fire Walls are now available for use as interior dividing fire walls or as exterior curtain-type fire walls. They can be installed in old or new buildings, of either steel or reinforced concrete construction, where a fire hazard may exist, or where the requirements of Fire Insurance Underwriters or Building Codes must be met. The Mahon Metalclad Fire Wall is field constructed. It has been tested by the Underwriters' Laboratories, Inc., and has been given a Two-Hour Rating for use as either an interior or exterior fire wall. When employed as an exterior wall, Fiberglas insulation can be inserted between the interlocking ribs of the inner wall plates, thus providing insulating properties superior to that of a conventional masonry wall with furred lath and plaster. Exterior Wall Plates may be Aluminum, Stainless Steel or Enamel Coated Cold Rolled Steel. The important feature of the Mahon Fire Wall is the Impaling Clip with its Stainless Steel Spike (Patents Pending) which permits construction of the wall with only .0048 sq. in. of through-metal per sq. ft. of wall area. Mahon engineers will cooperate fully in supplying information and assistance in adapting this product to your particular requirement.

THE R. C. MAHON COMPANY • Detroit 34, Michigan
Sales-Engineering Offices in Detroit, New York and Chicago • Representatives in Principal Cities
Manufacturers of Underwriters' Rated Metalclad Fire Walls; Insulated Metal Curtain Walls; Steel
Roof Deck and Long Span M-Decks; Acoustical and Troffer Forms; Electrified M-Floors; Rolling
Steel Doors, Grilles, and Underwriters' Labeled Rolling Steel Fire Doors and Fire Shutters.

Section of Mahon Metalclad Fire Wall showing Construction Features. Four layers of $\frac{1}{2}$ " Plaster Board are sandwiched between Roll-Formed Steel Wall Plates. All Joints in both Wall Plates and Plaster Board are Offset.

MAHON

Now, trim new Wall-Fin custom styling with



New functional beauty! TRANE Wall-Fin brings draft-free heating plus modern design to long wall and window areas. Large tube diameters make it especially suitable for loop systems where pressure drop is critical. Element is mounted on ball bearings to provide free, silent expansion with no strain on enclosure. New reinforced construction holds shape during shipment and installation. Available in a wide variety of styles to suit any building plan.

from Trane gives you production models!

Simple, rugged construction and smoothly fitting components give you "custom-built" appearance on every job

When you specify new TRANE Wall-Fin, you can depend on getting a trim, neat job with smooth joints and perfect alignment every time. And new TRANE Wall-Fin is ruggedly built with die-formed parts . . . custom-fitted components that will take years of hard use—yet retain their sleek, tailored appearance. Reinforcing channels and gussets at points of strain prevent sagging, bending.

The new TRANE Wall-Fin has been designed with fewer parts . . . with *precision-held dimensions* on all parts to assure a "custom-built" appearance with far less on-the-job fitting and tailoring. New slip-joint

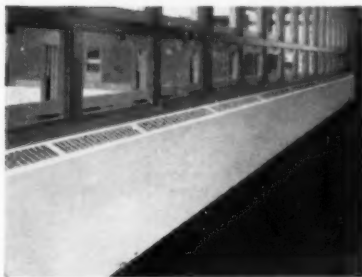
construction makes it easy to align, with smooth fit of all joints assured.

Since 1925, TRANE has pioneered in developing and improving radiation products. Now the broadest, most complete line in the industry, TRANE offers you everything you need for any radiation job—whether it's a single room or hallway, or the largest school or hospital. And when you turn to TRANE, you simplify procurement, pinpoint responsibility for *all* your radiation needs.

So for your next job, turn to TRANE! Just call your nearby TRANE Sales Office, or write TRANE, La Crosse, Wisconsin.

Check these new TRANE Wall-Fin features:

- Extra rugged construction—reinforcing channels and gussets at points of strain.
- Precision-held dimensions on all parts—less on-the-job fitting. Fewer parts to assemble.
- Element glides silently on ball-bearing cradles for free expansion without strain on enclosure.
- All mountings are *inside* the cabinet—no interference when cabinet meets baseboard or coving.
- Smoother fit and easier alignment due to slip joint construction.
- Rubber channel strip seals cover to wall.
- Speedier fit-up of all key parts. Slotted holes for element and enclosure; rigid channel-reinforced top edge for easy, tight-to-the-wall fit without bolts or screws; snap-on bottom edge; pre-drilled holes for end laps.
- Wide range of styles, sloping, top or front outlet—available in 4" and 5¼" depth and three heights, for steam or hot water.
- Complete precision-built accessories—dampers, access doors, pilaster covers and end panels give real custom-built appearance.



TRANE Convectors combine efficiency with compactness and beauty. Aluminum-copper heating element responds quickly, provides heat instantly . . . eliminates wasteful overheating. Can be installed free-standing, recessed or wall-hung. 21 cabinet styles to choose from.



TRANE Wall-Line Convectors are designed for relatively short runs and very high capacity—providing attractive, modern wall-to-wall installations in schools, office buildings, hospitals and institutions. Compact and rugged construction, with extra reinforcements and full back.

*For any air condition,
turn to*

TRANE

**MANUFACTURING ENGINEERS OF AIR
CONDITIONING, HEATING, VENTILATING
AND HEAT TRANSFER EQUIPMENT**

THE TRANE COMPANY, LA CROSSE, WIS. • EASTERN MFG. DIV.,
SCRANTON, PA. • TRANE COMPANY OF CANADA, LTD., TORONTO
90 U. S. AND 18 CANADIAN OFFICES

PRODUCT REPORTS

Electric Door Operator

A pedestrian swing door unit which can be plugged into any ordinary 110v electrical outlet is said to be the first all-electric pedestrian door operator introduced in the power door field. For new construction, the unit can be completely concealed in a floor case beneath the threshold, while in converting manually operated doors to electric operation, it is mounted above the door. Controls include automatic floor mat and electric eye types, as well as a variety of semi-

automatic switches. A built-in automatic check permits manual operation of the door in case of power failure. *Electric Power Door Co., 2127 E. Lake St., Minneapolis, Minn.*

Large Capacity Duct Systems

Walker junction boxes are available to accommodate several of the large capacity combination underfloor duct systems developed to meet increased use of telephone and other low tension service. The boxes are designed with a straight passageway to afford easier pulling of telephone cables up to 100

pair size. The boxes feature easy and precise leveling to screed line, and final adjustment can be made even after concrete has set. *W. H. Taylor, Adv. Mgr., Walker Brothers, Conshohocken, Pa.*



Circuit Breaking Devices

Saf-T-Arc circuit breaking receptacles, plugs and connectors are said to assure complete safety even when subjected to 50 per cent overload. Two grounding arrangements are offered to meet varying conditions, and all devices are polarized so that plugs will fit only into receptacles or connectors having the same electrical characteristics. Made with cast aluminum housings and enclosures, the units are available in four complete lines — 30, 60, 100 and 200 amps; 600v, AC; or 250v, AC or DC. *Russell & Stoll Co., Inc., 125 Barclay St., New York 7, N. Y.*



We realize that Technical Departments are only one segment of the vast complex which an Architect must integrate into the functional unit required for today's hospital • Yet they are a vital segment ... and changing. Standards, techniques and equipment are advancing almost from day to day.

As the world's largest designer and manufacturer of Surgical Sterilizers and related hospital equipment, we at American Sterilizer have pioneered many currently accepted techniques and technical departments. And we are constantly researching others which hold promise.

* We have, in short, authoritative and current data of professional interest to every Architect engaged in a hospital project.

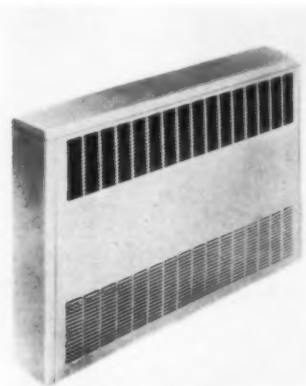
Much of that information is summarized in your current Sweet's Architectural File. But more than that, our Technical Sales Division is available for consultation and for the preparation of room plans, specifications and rough-in drawings related to your specific project. As we said, we like to be helpful.

Central Sterile Supply Departments
Solution Rooms
Milk Formula Rooms
Sub-sterilizing Rooms
Central Instrument Rooms
Utility Rooms

*Let us know
how we can
help You!*



**AMERICAN
STERILIZER**
ERIE • PENNSYLVANIA

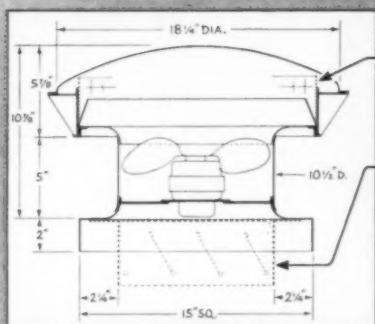
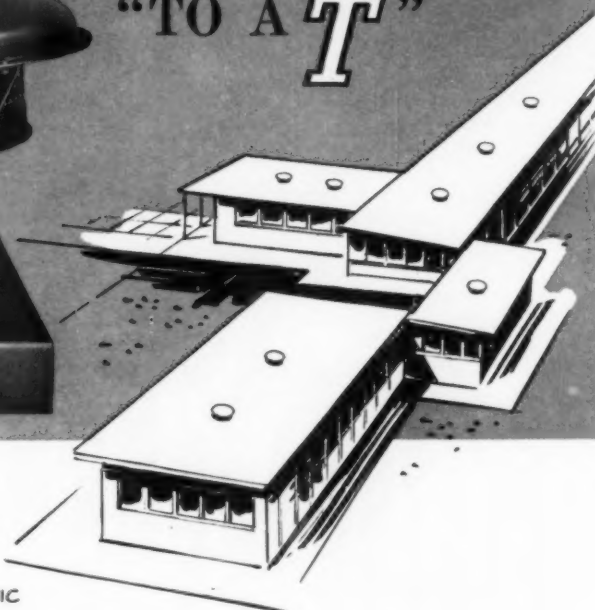


Electric Radiator

A steam convector operating by electricity is said to provide the benefits of steam-type heating without liquids. Automatic operation is controlled by a thermostat and pilot light. Models are available for free-standing or recessed installation in sizes from 16 in. wide by 20 in. tall to 64 in. wide by 24 in. tall. All units are 6 in. deep. They range from 650 to 3000 watts and operate on 230 volts. *Spartan Electric Radiator Corp., 52-55 74th St., Maspeth 78, N. Y.*

(More Products on page 292)

NEW *Allen* T-TYPE ROOF FANS FIT MANY NEEDS "TO A T"



1/2" MESH
BIRD
SCREEN

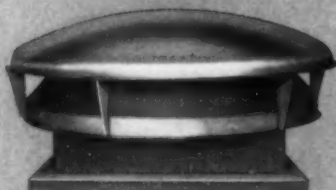
AUTOMATIC
DAMPER
OPTIONAL

"T-TYPE" SPECIFICATIONS

FAN DIA	MOTOR RPM	CAPACITIES (CFM)			
		.900 SP	.100 SP	.125 SP	.250 SP
18"	1550	420	255	230	110

115 volts, single phase, 9 watt motor

Rated in accordance with the Standard Test Code
by the Texas Engineering Experiment Station



Allen low contour "I-Line" Roof Fans:
Direct Drive: 450 to 34,000 cfm.
Belt Drive: 4,000 to 20,150 cfm.

HERE's the answer to today's architectural needs for low velocity roof ventilation on public and commercial buildings, especially one-story, flat-roof modern structures. The new Allen "T-Type" Roof Fan has a low, attractive silhouette (only 10 7/8" high on the 420 model) that blends well with modern exteriors and its design and construction assure high efficiency, easy installation and low maintenance. Standard fabrication is of galvanized steel—aluminum is available. Automatic dampers are optional.

Now . . . one general design in wide range of capacities

Used in connection with the Allen "I-Line" Roof Fans, shown at left, the new "T-Type" now enables architects and engineers to have all ventilators on a roof of the same general design and low contour—from 420 to 34,000 cfm.

See Sweet's for the complete Allen line of roof ventilators
—write for data on new "T-Type" Roof Fans



ALLEN COOLER & VENTILATOR, INC.
ROCHESTER, MICHIGAN

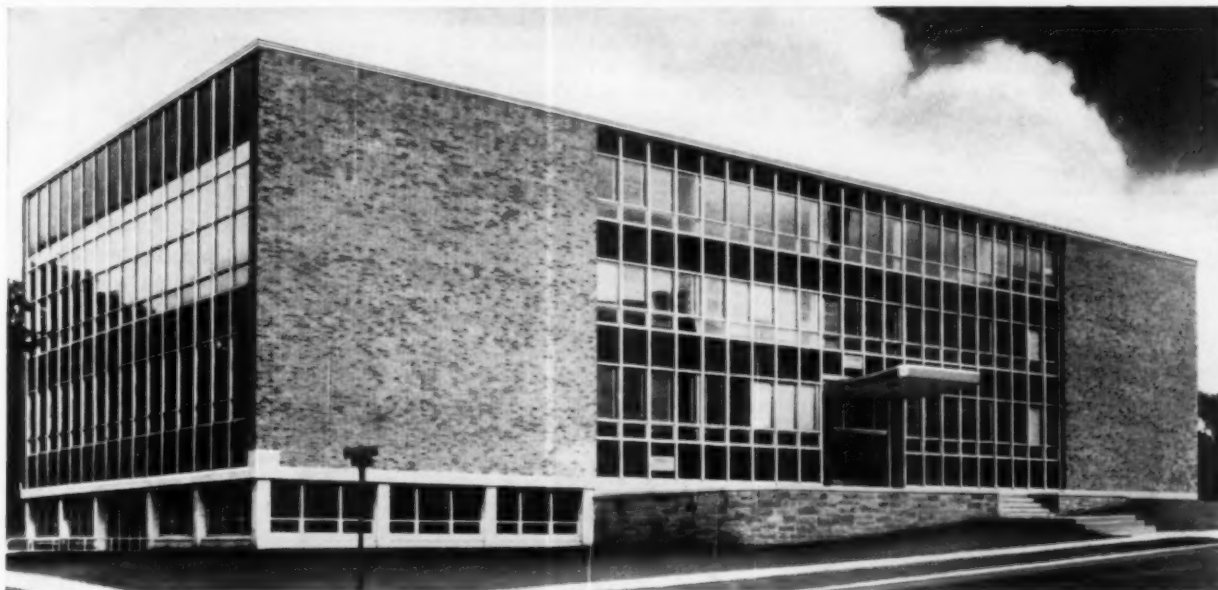
Roof ventilators for every commercial and industrial need • Representatives in principal cities

LUPTON metal windows...



KELLOGG (Idaho) HIGH SCHOOL. Architects: Culler, Gale, Martell & Norrie; Perkins & Will. Contractor: Johnson-Busboom-Rauh, Spokane, Wash. Entire walls of LUPTON Steel Architectural Projected Windows provide maximum light and air plus weathertight construction.

and curtain walls give freedom of design at low cost



NIAGARA COUNTY BUILDING, Niagara Falls, N.Y. Architect: Charles F. Obenhack. Contractor: Walter S. Johnson Building Co. Outside face of this LUPTON Curtain Wall is green-black porcelain-enameled aluminum laminated with honeycomb core, galvanized back. Double-glazed 1'-thick fixed lights, 1/2'-thick ventilators opening in.

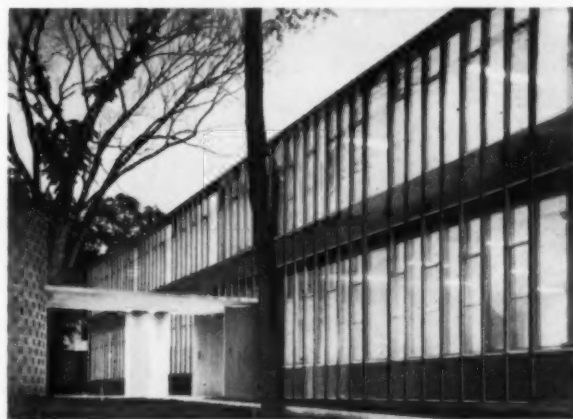
These views of recent LUPTON curtain-wall and window installations prove the beauty and modernity of LUPTON construction. The architects who created the buildings found many added advantages, among which are the following:

The wide range of LUPTON metal-window and curtain-wall styles provides unusual planning flexibility, a freedom of design with custom or standard units. In fact, LUPTON curtain walls and windows are *your* idea, executed by LUPTON engineering and manufacturing experience.

Erection is fast and economical—usually from within the building, without scaffolding. In fact, LUPTON Aluminum Curtain Walls are often put up by LUPTON's own experienced, fast-moving crews.

Assembly is simplified, routinized, because all parts are accurately made and delivered on schedule by LUPTON, a veteran in metal-window manufacture.

INVESTIGATE the advantages of LUPTON construction—write for information on LUPTON Aluminum Curtain Walls and Metal Windows as they apply to your current and future projects.



COLLEGE OF THE BIBLE, Drake University, Des Moines, Iowa. Architects: Eero Saarinen & Associates, Bloomfield Hills, Mich. Contractor: Fane F. Vawter Co., Des Moines, Iowa. LUPTON curtain-wall units—one-third the thickness of masonry—go up fast, leave extra square footage indoors.

LUPTON

METAL WINDOWS • ALUMINUM CURTAIN WALLS

MICHAEL FLYNN MANUFACTURING CO. Main Office and Plant: 700 East Godfrey Avenue, Philadelphia 24, Pa.

PRODUCT REPORTS

Water Conditioner

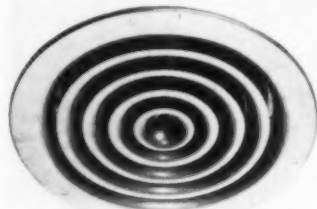
A new water conditioning device is said to eliminate hard water scale and corrosion in boiler systems, air-conditioning units and a variety of other apparatus using water. The conditioner works without chemicals or moving parts, and requires no maintenance or servicing. Consisting of a homogenizing chamber and a dispersing cell with a kinetic energy generator, the unit energizes atoms of the water solution, and prevents scale from forming. Existent scale is gradually

dissolved and kept in suspension or drained off with normal water usage. *Packard Water Conditioner Division, Inc., Jacksonville, Fla.*

Curtain Wall Sealers

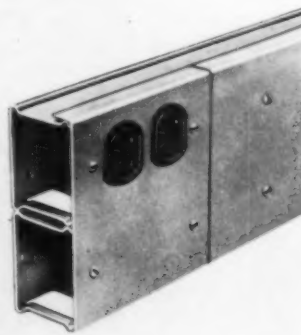
When mixed with a curing agent, a new series of liquid two-part synthetic rubber base sealers for exterior and interior joints and openings between curtain wall panels and the metal framework of buildings cure in place to form a flexible, durable solid rubber seal. Flowed into place with a hand caulking or pressure activated gun, the *Weatherban* sealer reaches a tack-free solid state in from 24

to 48 hours. Sealers are available in black, tan and aluminum. *Adhesives and Coatings Div., Minnesota Mining & Mfg., Co., 411 Piquette Ave., Detroit 2, Mich.*



Architectural Loudspeaker Baffles

Seven new products, including louvred recessed ceiling baffles, trim squares and safety guards, have been added to the *Soundolier* line of architectural loudspeaker baffles. The two series of recessed ceiling baffles are designed to match standard and deluxe air diffusers, keeping all ceiling installations consistently styled. The safety guards protect both baffle and loudspeaker in gymnasium, school and institutional applications, while the trim rings, produced with either round or rectangular cutouts fit around recessed trim ring baffles to provide wider design choice. *Soundolier, Inc., P. O. Box 3848, St. Louis 22, Mo.*



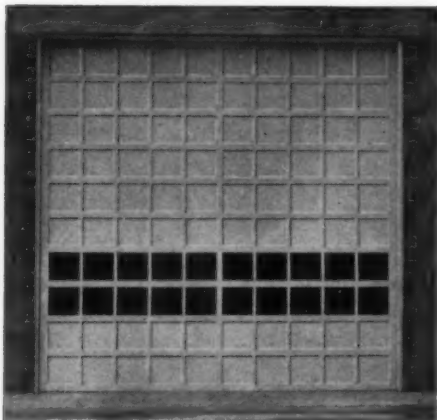
Twin Surface Raceway

Twinduct, a new metal surface raceway designed to carry both high and low potential conductors in a single run, offers two separate raceways with a single screw-on cover. A patented bridge retains wires during installation, holds the capping, and serves as the method of installing service advances in the raceways. Measuring 1½ in. deep by 4¼ in. high, *Twinduct* comes in 10 ft lengths with knock-outs and mounting holes on 15 in. centers in the base. *National Electric Products Corp., Gateway Center, Pittsburgh, Pa.*

Monarch Door

Sold thru installing dealers only

SECTIONAL OVERHEAD DOORS



COMMERCIAL
AND
INDUSTRIAL
DOORS



Monarch Sectional Overhead Doors can be installed in any industrial plant, wherever an opening is available, interior or exterior. Monarch Sectional Overhead Industrial Doors are the finest that experience and engineering skill can produce. They are usually BIG doors, involving elements of operation and safety that only real "Know-How" can successfully master. Hundreds of such doors, including some of the largest ever built, furnish evidence that MONARCH means the ultimate in efficiency, safety and satisfaction.

Various types of MONARCH Sectional Doors and equipment involved in their construction and use are described in our 45 Page Catalog. Yours for the asking.

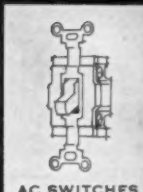
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Manufactured by

THE MONARCH DOOR, INC.

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AC SWITCHES



DUPLEX
OUTLETS



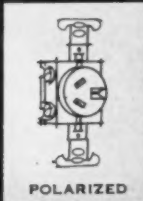
GROUNDING
OUTLETS



DESPARD
LINE

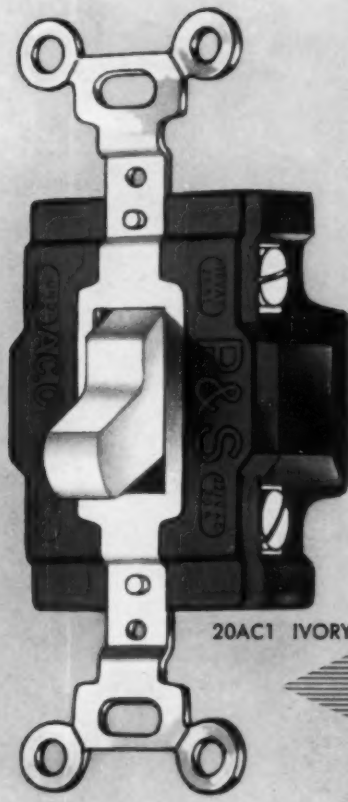


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POLARIZED

a complete
line of
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devices
of the
Highest
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SUPER
AC SWITCHES

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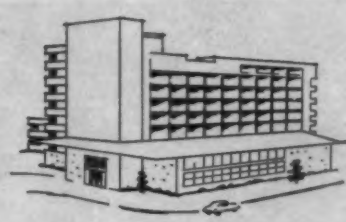
mark of Quality

distinctive design...
your guarantee of long life

Every time you write a specification, you bet your reputation on it. That's why it pays to specify only the best . . . products like P&S Super AC Switches. They're backed by the skill of Pass & Seymour — leaders in the wiring device field for over 65 years.

P&S Super AC Switches hold the highest rating of the National Electrical Code for tungsten filament and fluorescent lamp and motor loads. You can specify them with confidence for hotels, offices, factories and stores.

For information about these and other quality P&S products write Dept. AR-21.



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In Canada: Renfrew Elec. & Refrig. Co., Ltd., Renfrew, Ontario

MAKE THE COMPLETE JOB COMPLETELY P&S



The Donald Sharp Memorial Hospital, San Diego, Calif. Architects: Stone & Mulloy and S. P. Marraccini, San Francisco. Structural engineer: George Washington, San Francisco. Contractor: Treple Construction Co., San Diego.

CLEAN-CUT BEAUTY AND OUTSTANDING ECONOMY FOR HOSPITALS WITH

Architectural Concrete

These two views of the Donald Sharp Memorial Hospital in San Diego, Calif. show the possibilities of architectural concrete in designing modern hospitals.

This nine-story, 122,500 sq. ft. structure has architectural concrete exterior surfaces, a reinforced concrete frame and flat slab and ribbed concrete floors.

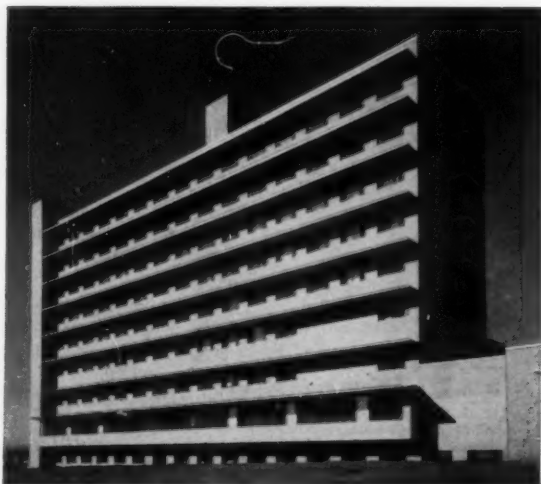
Hospital designers have discovered that architectural concrete offers many advantages, distinctive beauty, rugged strength, unexcelled resistance to the elements, maximum firesafety, long life and unmatched economy.

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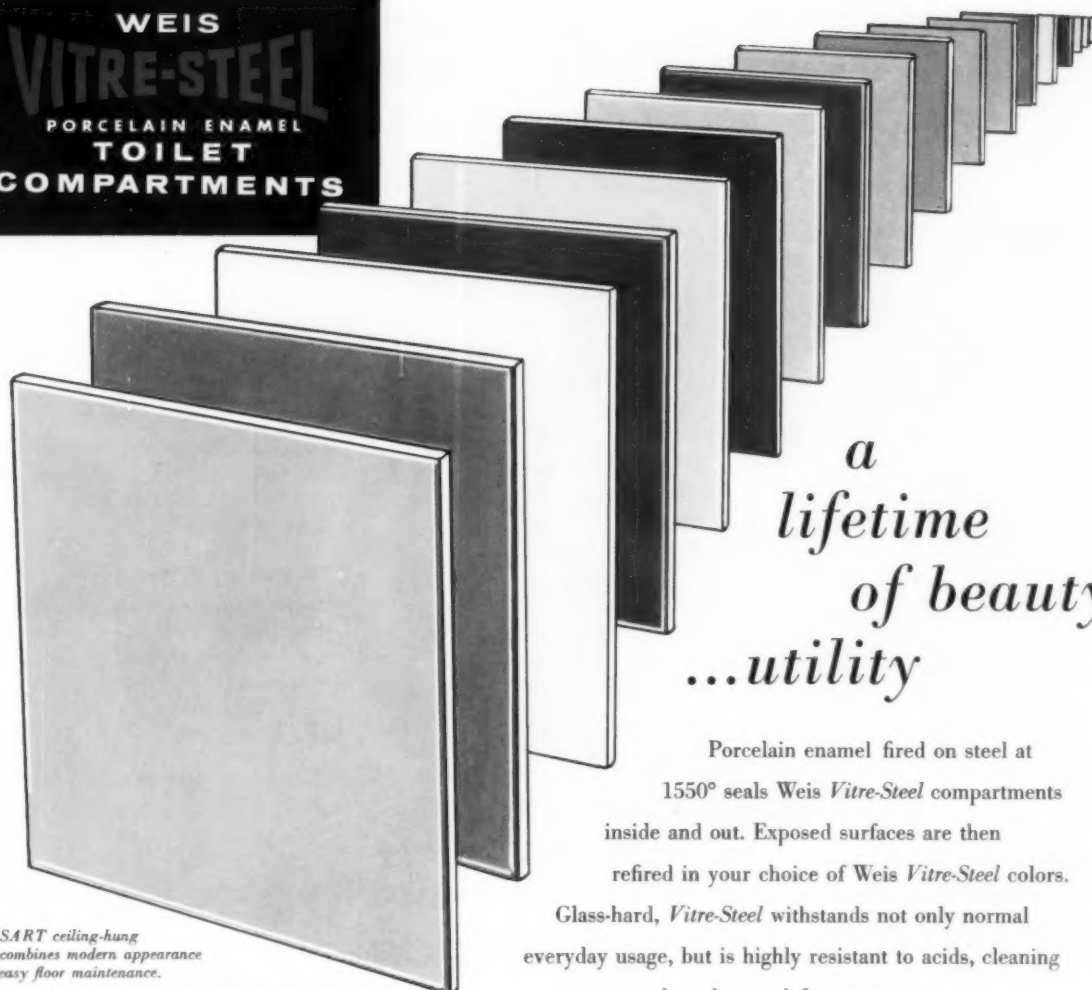
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A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work



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VITRE-STEEL
PORCELAIN ENAMEL
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COMPARTMENTS



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of beauty
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Porcelain enamel fired on steel at 1550° seals Weis *Vitre-Steel* compartments inside and out. Exposed surfaces are then refired in your choice of Weis *Vitre-Steel* colors. Glass-hard, *Vitre-Steel* withstands not only normal everyday usage, but is highly resistant to acids, cleaning compounds and even defacement.

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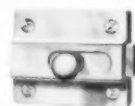


HENRY WEIS MFG. COMPANY, INC.
56 Weisteel Building, Elkhart, Indiana

SPECIFICATIONS: Panels, stiles and doors shall be flush construction, and shall be made of two face plates of not less than 18-gauge enameling iron with formed edges, cemented under pressure to fiberboard core and joined by welding abutting edges at suitable intervals. Edges shall be bound with die-drawn stainless steel moldings interlocked under tension onto formed edges, mitered and welded at corners and welds ground smooth. Partitions and doors shall finish 1" thick; stiles shall finish 1 1/4" thick.

All surfaces, concealed and exposed, shall receive a vitreous porcelain enamel ground coat. All exposed surfaces shall then be given a cover coat, in a color selected from the Weis color chart of decorator colors.

Doors shall be hung on WEIS gravity hinges with upper hinge mounted in recess in edge of door. Doors shall be fitted with slide bar latch, combination keeper and bumper and coat hook with rubber-tipped bumper, all to be brass, chromium plated. Latches and coat hooks shall be attached with theft-resistant screws.



SLIDE BAR LATCH



COMBINATION
KEEPER AND BUMPER



COMBINATION
COAT HOOK
AND BUMPER



CUTOUT TYPE TOP
DOOR HINGE



UNIVERSAL BALL BEARING
GRAVITY TYPE
BOTTOM DOOR HINGE, CUTAWAY VIEW



In and Out ... DAY AFTER DAY

with complete safety and dependability



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EXPORT: Consultants International, 69-77 Bedford Street, Stamford, Connecticut

LITERATURE

Catalogs • Brochures • Booklets

Structural Facing Tile (A.I.A. 3)

Latest revision of *Specifications for Ceramic Glazed and Unglazed Structural Facing Tile* includes the new specification for economy ceramic glaze as well as data on requirements, tolerances, testing and available colors. *Facing Tile Institute, 1520 Eighteenth St., N.W., Washington 6, D. C.**

Hollow Metal Doors

Contains specifications and photos of *Steelcraft Series 16* panel and flush type doors, as well as complete details on hardware and accessories. 12 pp. *Steelcraft Mfg. Co., Inc., 9017 Blue Ash Rd., Rossmyrne, Ohio.**

The ABC of Fire Protection

Discusses nature and advantages of fire protection systems, and describes complete line of *Automatic* fire protection components and systems. 36 pp. *Automatic Sprinkler Corp. of America, Youngstown 1, Ohio.*

Fluorescent Lighting Guide Book

Cites advantages of fluorescent lighting for industrial and commercial use, with chapters on lamp types, starters, lamp-holders, ballasts and special lamps. 24 pp. *Sylvania Electric Products Inc., 60 Boston St., Salem, Mass.**

Gas Heating Equipment Catalog

(A.I.A. 30-C-43/30-B-1) Covers *Reznor* line of gas-fired commercial and industrial heating equipment, with specifications, details, dimension drawings and tables. Catalog GN-57. 16 pp. *Reznor Mfg. Co., Mercer, Pa.**

1957 Vinyl Asbestos Tile Color Chart

(A.I.A. 23-G) Shows colors and patterns available from each of eleven leading manufacturers of vinyl asbestos tile, as well as the various tiles that give the same general effect. *The Asphalt Tile Institute, 101 Park Ave., New York 17, N. Y.*

Multi-Zone Air Conditioning Units

Describes *Multi-Zone* air conditioning units, with dimension sheets, specifications and pertinent engineering data. Bulletin No. C-1100-B98 P. *Advertising & Sales Promotion Dept., Worthington Corp., Harrison, N. J.**

* Other product information in Sweet's Architectural File, 1957.

(More Literature on page 300)



Mr. Carey (seated) discusses plans for his new Harvey Park Addition in Denver with his sales manager, Morris Gilligan, and David R. McMillan (also seated) of Mountain States Telephone and Telegraph Company.

"Concealed telephone wiring is a proven sales feature"

—says Mr. J. J. "Lou" Carey, Builder, of Denver, Colorado

"More and more customers are asking for concealed telephone wiring," says Mr. Carey. "It's one of the conveniences and refinements they expect to find in a modern home.

"Concealed telephone wiring is a proven sales feature because the American public wants more telephones. They want these telephones located handily and the wiring concealed. Our slogan is 'The Best Planned Home We Can Build,' and that certainly includes telephone planning."

In his eleven years as a builder, Mr. Carey has been associated with the construction of more

than 3000 homes. At present he is at work on 450 more. He is a past president of the Home Builders Association of Metropolitan Denver, and is a National Director of NAHB. In company with trend-minded builders across the country, Mr. Carey is convinced of the value of concealed telephone wiring as a quality sales feature.

Your nearest Bell Telephone business office will help you with concealed wiring plans. For details on home telephone wiring, see Sweet's Light Construction File, 8i/Be. For commercial installations, Sweet's Architectural File, 32a/Be.

Working together to bring people together
BELL TELEPHONE SYSTEM





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Braniff International Airways Base, Love Field, Dallas

Designed by Pereira & Luckman

General Contractor, Robert E. McKee

Plumbing Contractor, Sam P. Wallace



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WESTINGHOUSE WATER COOLERS were specified because they, too, are more refreshing by design...

The crisp, cool-gray cabinet and sanitary, stainless-steel top invite one and all to quick, cold refreshment. And Dual Drink Control—both finger-tip and toe-tip operation—makes drinking so much easier. No spurt or splash, either, thanks to the Automatic Stream-Height Regulator. What's more, a Patented Pre-Cooler and Super Sub-Cooler provide up to 60% more refreshing cold water! More dependable, too, with the exclusive Free-Flow Water Valve that eliminates all possibility of leaks.

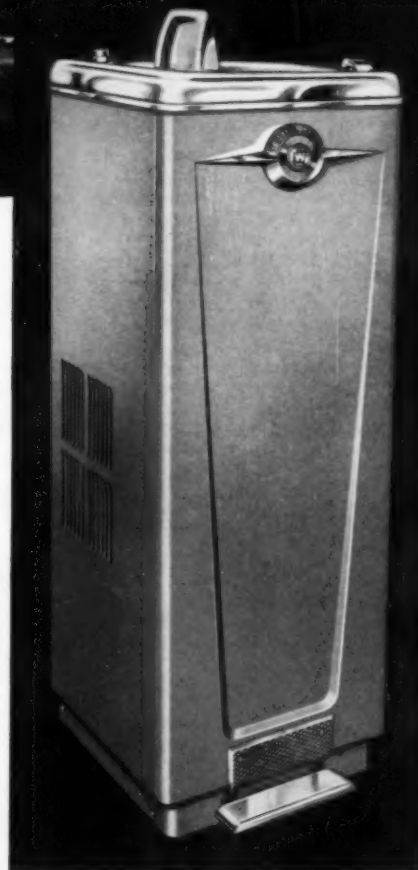
Small wonder so many leading architects, builders and plumbing contractors are specifying Westinghouse Water Coolers. Put them in your future plans, too. Call your local Westinghouse Distributor listed in the Yellow Pages. Or write to Westinghouse Electric Corp., Refrigeration Specialties Division, Springfield 2, Mass.

19 models to choose from... exactly the right type and size for every need.



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A check of the type A school lunches in the U.S. Dept. of Agriculture file #PA 271 has shown that the majority of the foods that require cooking may be cooked faster, better, easier in a combination unit. No more hot range-top cooking — no more pots and pans that need scouring and are heavy to lift — no more hot surfaces and stuffy kitchens.

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OFFICE LITERATURE

Carthage Marble (A.I.A. 22-A-2)

A Story About Man and His Search for Beauty presents illustrations of classical and present-day examples of the use of marble, with a section on marble production. The physical characteristics of Carthage marble are also discussed. 52 pp. Carthage Marble Corp., Box N612-AR, Carthage, Missouri.

Airflow Fume Hoods (A.I.A. 35-E)

Includes engineering data and recommendations, operating characteristics and operating cost comparisons for complete line of laboratory fume hoods. 48 pp. Kewaunee Mfg. Co., 5046 S. Center St., Adrian, Mich.*

Water Coolers, Purifiers, Fountains

Catalog 57A presents engineering data, specifications and drawings for Filtrine water coolers, drinking fountains, and filter-purifiers. 24 pp. Filtrine Mfg. Co., 82 West Prospect St., Walldwick, N. J.*

Electrified Cellular Concrete Floors

(A.I.A. 17-A) Office Building Manual contains detailed information on the Flexicore electrified cellular concrete floor system. A section on structural design includes design data for two typical office buildings. 32 pp. Flexicore Co., Inc., 1932 E. Monument Ave., Dayton 1, Ohio.*

Merchandising Display System

Twenty-four page brochure illustrates design possibilities of the Vizusell system of channels and brackets for merchandising displays, with installation information and special sections on individual merchandising units. Vizusell Brochure 385, L. A. Darling Co., Dept. 32, Bronson, Mich.

Year 'Round Unit Ventilator

Discussion of general characteristics of the HerNel-Cool II classroom air conditioner is supplemented by selection data, specifications and pertinent technical information. 24 pp. Dept. PD, American Air Filler Co., Inc., 215 Central Ave., Louisville 8, Ky.*

Glass-Clad Buildings (A.I.A. 17-A)

Illustrated file contains architectural specifications and details for glass curtain wall construction using structural glass panels, fiber glass spandrel insulation and 82-X curtain wall framing. Pittsburgh Plate Glass Co., 632 Fort Duquesne Bld., Pittsburgh 22, Pa.*

(More Literature on page 304)

STAIN RESISTANT



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Today more and more clients insist upon stain-resistant floors in all types of projects — because stain resistance means faster, more economical maintenance...makes it far easier to keep floors looking clean and neat all day long. But stain resistance is only one reason why more and more architects are specifying Moulflex Vinyl-asbestos flooring. Its bright, cheerful colors... the years and years of dependable service... its low cost... make Moulflex a sound, practical choice for virtually every project. Consider Moulflex and these other fine MOULTILE products, including Jubilee, Moultile Asphalt Tile, Moulcork and Parquetry, when next you specify flooring.

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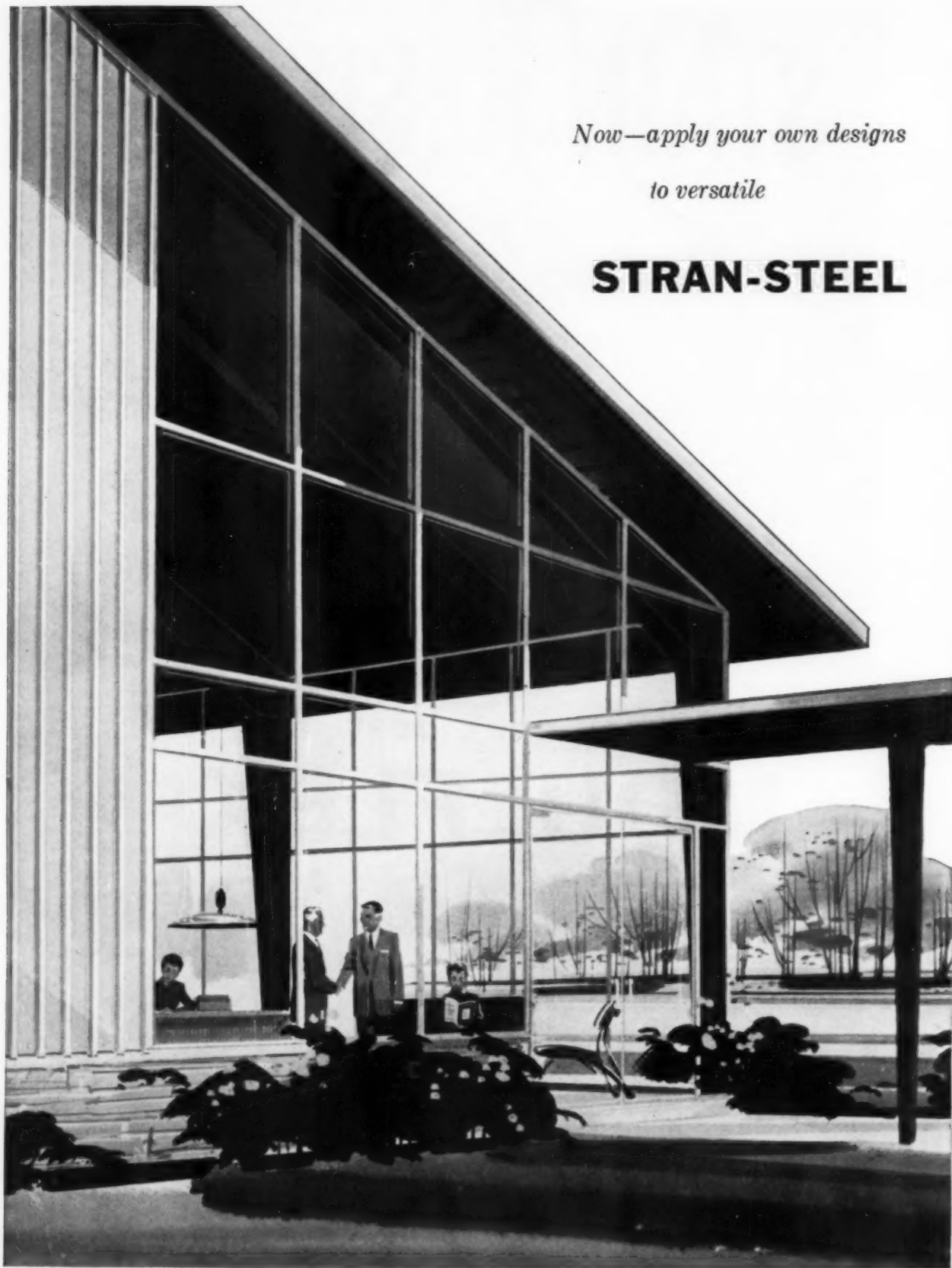
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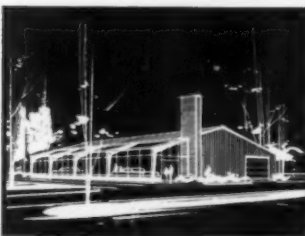
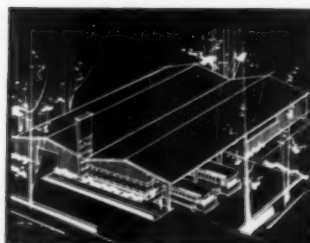
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*for attractive, low-cost industrial
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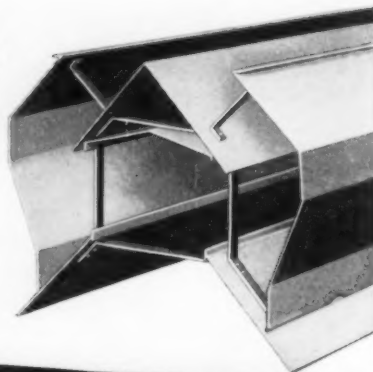
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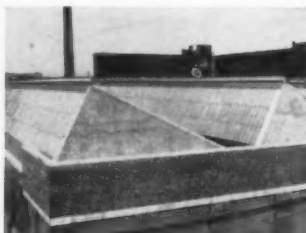
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Heat Valve is designed for maximum capacity with least possible friction in all its throat sizes — 4" to 42" — ten in all. Its contour invites assistance from outside air currents to *pull* unwanted heat, smoke and fumes out of the building. Made in ten-foot lengths as standard, Heat Valve is adaptable to any need — from single sections spotted where most needed, to continuous runs the length of the roof.

Any roof style — peak, slope, flat, saw-tooth — accommodates Swartwout Heat Valve. Ventilator is always weatherproof. Adjustable damper controlled by several optional methods, any position from tight closed to wide open.

You can provide practically any area of roof opening desired with this efficient gravity ventilation, at economical cost. Thousands of miles of Heat Valve used on many types of buildings since its introduction by Swartwout in 1934 . . . Write for fully illustrated Bulletin HV-G.

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OFFICE LITERATURE

Gas-Vent Pipe and Fittings

(A.I.A. 30-D-4) Gives detailed data on double-wall, air-insulated four-inch oval and standard round pipe, and the necessary fittings. A selection chart is included. Catalog No. 1, 16 pp. *Dura-Vent Corp.*, 2525 El Camino Real, Redwood City, Calif.

Daylight Control With Plexiglas

(A.I.A. 26-A-9) Discusses types and uses of Plexiglas daylight louver panels, with illustrations, installation details and suggested specifications. 16 pp. *Rohm & Haas Co.*, Washington Sq., Philadelphia 5, Pa.*

Garden Redwood Ideas From California

Describes and illustrates outstanding examples of the use of garden redwood for such outdoor structures as terraces, fences, garden shelters, retaining walls, benches and planting beds. 16 pp. *Service Library, California Redwood Assoc.*, 576 Sacramento St., San Francisco 11, Calif.*

Fire Resistive Ratings (A.I.A. 20-B-1)

Technical Bulletin No. 8 gives, in chart form, the fire resistive ratings for metal lath and plaster used with various types of steel and wood construction. *Metal Lath Manufacturers Association, Engineers Bldg.*, Cleveland 14, Ohio.*

Finned Radiation and Enclosures

(A.I.A. 30-C-4) New 20-page catalog No. FT-55 covers fifteen basic heating elements and several types of enclosures, with ratings, dimensions and pertinent technical data. *The Rittling Corp.*, Buffalo 5, N. Y.

Diffuser Selection Manual (A.I.A. 30J)

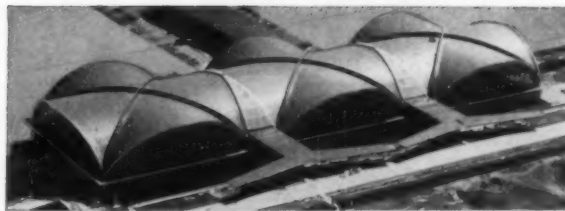
Selection manual No. 60-1957 gives performance data, typical specifications, and selection and installation information on *Anemostat* draftless aspirating air diffusers for conventional, high temperature differential and high velocity systems. 78 pp. *Anemostat Corp. of America*, 10 East 39th St., New York 16, N. Y.*

Sliding Glass Doors (A.I.A. 16-E)

Gives general information, details and specifications on *Arcadia* line of aluminum and steel sliding glass doors. 16 pp. *Arcadia Metal Products*, 801 S. Acacia Ave., Fullerton, Calif.*

(More Literature on page 308)

Another fine



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heating assignment for Petro

The Petro-Kewanee burner-boiler units shown below were chosen for one of the most magnificent new buildings in America. Says *Architectural Forum*, "St. Louis has now given the age of air travel its first appropriate terminal." This "new kind of big room" is a series of concrete cross-vaults 412 feet long.

The heating plant consists of two Petro forced draft firing units with matched Kewanee boilers. They are fully integrated units with all burner components factory engineered, installed and mounted. The burners are equipped to fire either oil or gas with peak efficiency, and fuels can be switched quickly.

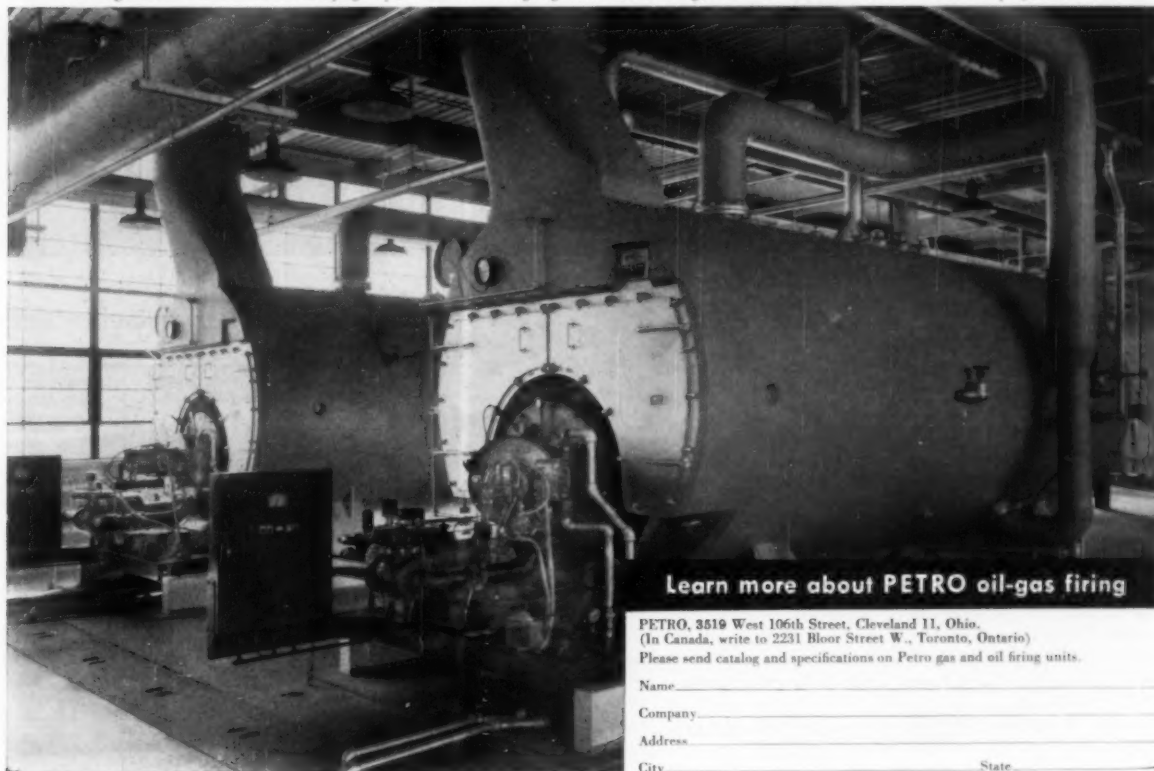
The Petro forced draft firing system can be

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Learn more about PETRO oil-gas firing

PETRO, 3519 West 106th Street, Cleveland 11, Ohio.
(In Canada, write to 2231 Bloor Street W., Toronto, Ontario)
Please send catalog and specifications on Petro gas and oil firing units.

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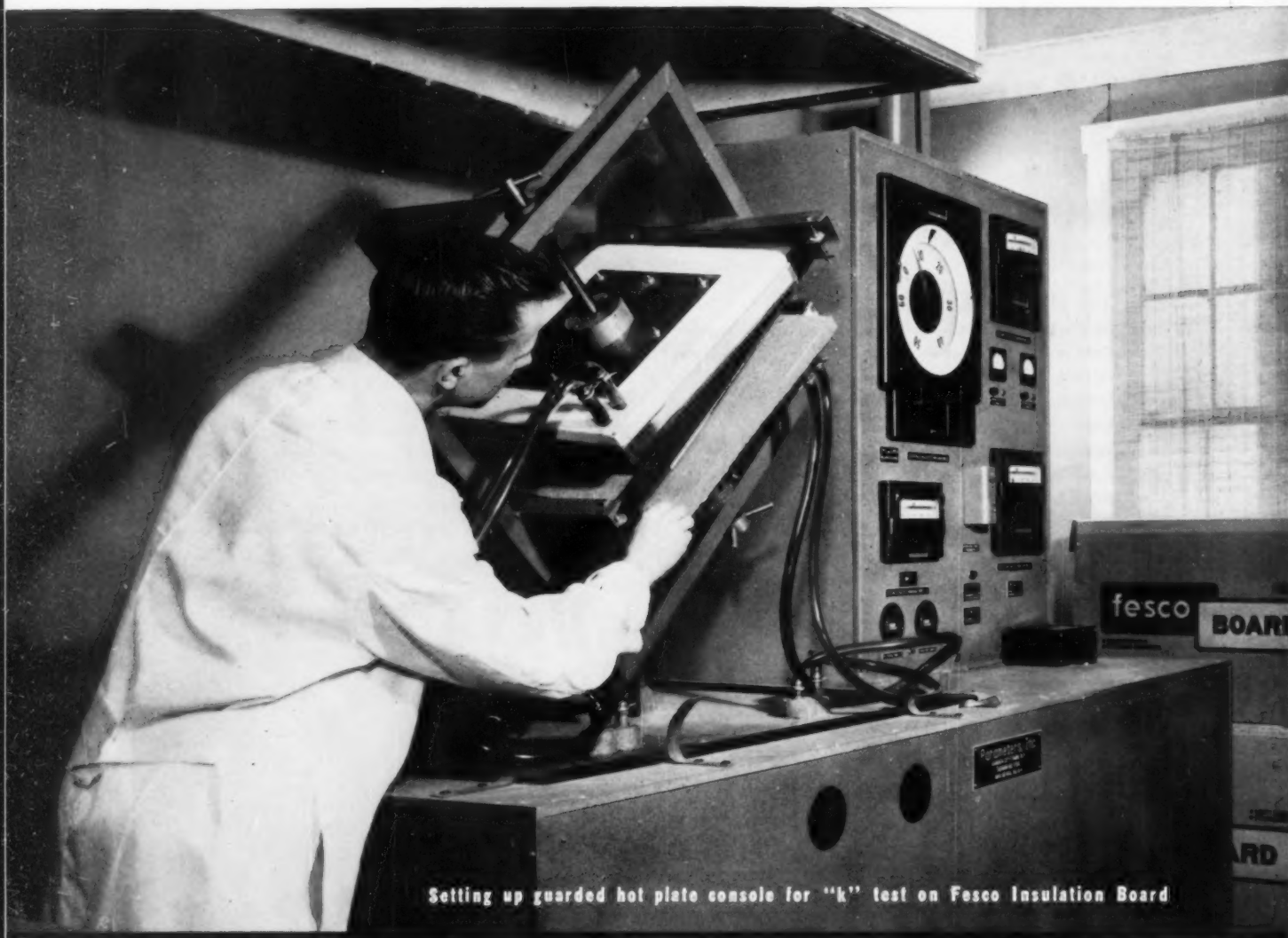
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Are you sure of the



Setting up guarded hot plate console for "k" test on Fesco Insulation Board

THE TERMS: What is "k", "U", "C"?

British Thermal Unit (Btu): a unit of heat required to raise the temperature of one pound of water one degree Fahrenheit.

Overall Heat Transmission Coefficient (U): the heat transmission in Btu per hour, per square foot, per degree F of temperature difference from air to air of a given building section. This is always the final calculation, used to determine insulation specifications.

Thermal Conductance (C): the number of Btu per hour transmitted between surfaces of a square foot of a material of given thickness per degree F temperature differential between surfaces.

Thermal Conductivity (k): the number of Btu per hour transmitted between surfaces of a square foot of a material one inch thick, per degree F temperature differential between surfaces.

Thermal Resistance (R): the reciprocal of thermal conductance ($1/C$) or thermal conductivity ($1/k$).

U VALUES for standard roof deck construction

Construction: Roof Deck Type and Thickness	Without Ceiling	With Metal Lath & Gypsum Perlite Plaster Ceiling			
	Underside of Roof Exposed	Insulated with Fesco Board			
Fesco Thickness	2 1/2" 2" 1 1/2" 1" 3/4"	3/4" 1" 1 1/2" 2" 2 1/2"			
4" Concrete	.11 .14 .17 .22 .27	.19 .17 .14 .11 .10			
6" Concrete	.11 .13 .16 .22 .26	.19 .16 .13 .11 .10			
1" Wood	.10 .12 .15 .19 .22	.16 .15 .12 .10 .09			
2" Wood	.09 .11 .12 .15 .17	.14 .12 .11 .09 .08			
3" Wood	.08 .09 .11 .13 .14	.12 .11 .09 .08 .07			
2 1/2" Gypsum Fiber Concrete over 1/2" Gypsum Board	.10 .11 .13 .16 .19	.15 .13 .11 .10 .08			
2 1/2" Gypsum Fiber Concrete over 1" Rigid Ins. Board	.08 .09 .10 .12 .13	.11 .10 .09 .08 .07			
2" Perlite Concrete (1:6) on Steel form	.08 .10 .11 .13 .15	.12 .11 .10 .08 .07			
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"K" in your "OK"?

A Schundler "k" is not a "sometimes" thing. It is a stable figure, constantly verified on the research-standard guarded hot plate console installed in our modern laboratory. Here, at any hour, "k" tests can be run that are accurate to within three one-thousandths of one BTU.

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And a uniform, low "k" is only one of the properties found in every Schundler product. Principal Schundler products are formulated with a volcanic glass, known as perlite — and from this natural glass comes incombustibility, permanence, sound absorption, feather-light weight. Fused at temperatures of 1800°F, the physical properties of this volcanic glass are permanently set.

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incorporating Fesco Board

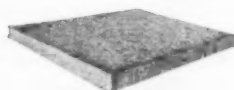
1. U values are expressed in BTU/SQ. Ft./Hr./Degrees F temperature differential, still air inside and 15 MPH wind velocity outside.

2. Coefficients and procedures used for determining U values are in accordance with current edition of A.S.H.V.E. Guide.

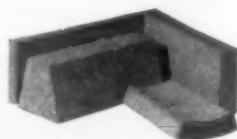
3. For suspended plaster ceiling section, air space between ceiling and deck assumed to be from 3/4" to 4".

Fesco Board is Approved by the Bureau of Standards and Appeals for use in New York City as incombustible roof insulation — under Cal. No. 442-56-5M.

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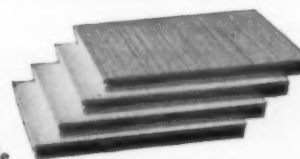
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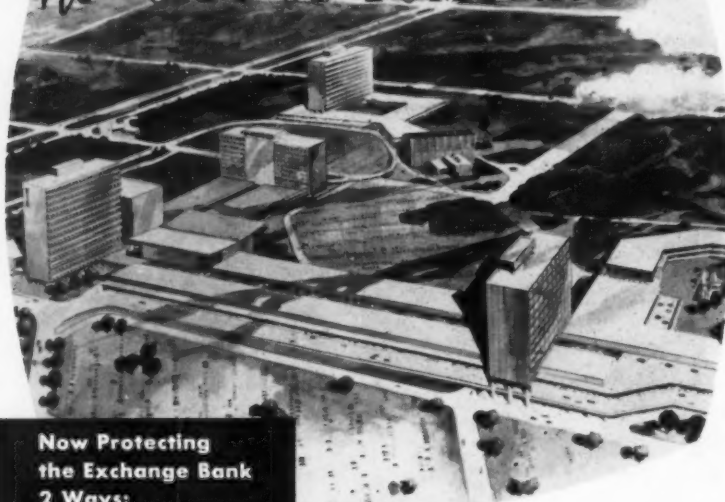


Coralux
Acoustical Plaster

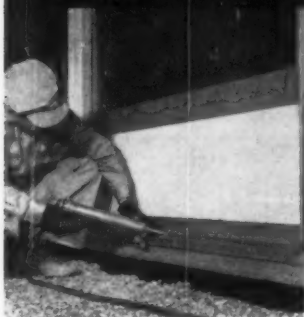


Ebbstone
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the "CITY OF TOMORROW"*



**Now Protecting
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2 Ways:**



Sealing Around Mullion and Sill
Joint in an aluminum-porcelain
window wall.



Sealing Horizontal and Vertical
Expansion Joints between cast
stone and panels.

**...and soon to protect
the Braniff Building**

*** DALLAS EXCHANGE PARK**
Architects, Engineers and Site Planners:
Lane, Gamble & Associates

...protected TODAY with **PRESSTITE No. 1175.1** **POLYSULFIDE-BASE** **SEALING COMPOUND**

This development, right in the heart of Dallas, will cover 120 acres, provide a total of 2,394,065 sq. ft. of usable floor space, and have a normal occupancy of about 25,000 persons.

In addition to four office buildings, the community will include a 1000-guest room hotel, medical research center, maintenance building, major department store and 100 retail shops.

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A DIVISION OF AMERICAN-MARIETTA COMPANY
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OFFICE LITERATURE

Ceco Steeldomes (A.I.A. 4-E-6)

Four-page brochure describes and illustrates Ceco-Meyer's Steeldomes for use in waffle-type concrete joist construction. *Ceco Steel Products Corp., 5601 West 26th St., Chicago 50, Ill.**

Cooling Towers

Bulletin CT-57-1 describes induced-draft counterflow cooling towers. Data sheet, charts and drawings are included. 32 pp. *Foster Wheeler Corp., 165 Broadway, New York 6, N. Y.*

Product Information Service

Information bulletins describing latest lamp developments and improvements to be mailed as issued. *Westinghouse Lamp Div., Westinghouse Electric Corp., Bloomfield, N. J.**

Glare Reducing Sheet Glass

Gives technical information on gray-tint glare-reducing glass, including specifications on light transmission, solar energy transmission and re-radiation graphs. *American Window Glass Co., Farmers Bank Bldg., Pittsburgh 22, Pa.**

Properties of Commercial Glasses

Revised 16-page bulletin (B-83) discusses mechanical, thermal, electrical and chemical properties of glass, including viscosity temperature curves and heat transmission data. *Technical Products Div., Corning Glass Works, Corning, N. Y.**

HS Utility Sets

Bulletin 8414 covers features and advantages of new HS Utility Sets. Selection factors, capacity tables, dimensional data and other technical information are included, as are sample specifications. 28 pp. *American Blower Div., American-Standard, Detroit 32, Mich.**

Armstrong Floors, Walls, Counter Tops

(A.I.A. 23-G) Comprehensive technical data on selecting and specifying resilient materials is supplemented by a summary of physical characteristics and relative costs, and a section on inspecting resilient floor installations. 47 pp. *Armstrong Cork Co., Lancaster, Pa.**

Bright Ideas for Brighter Living

Features suggestions for exterior and interior home lighting with sections on each major room or area. 16 pp. *Sylvania Electric Products Inc., 1100 Main St., Buffalo 9, N. Y.**

(More Literature on page 312)



Primed and sealed Roddis Doors offer important advantages. You get better final finish, more beautiful doors.

New Roddis service to Architects...

Factory prime-and-seal protection now available on all Roddis Doors!

New automatic production line technique assures accurate priming and sealing of doors for maximum factory-to-installation protection, finer end results.

Famous Roddis Doors, primed and sealed at the factory to highest standard specifications, bring real advantages in uniformity of appearance, better finishes, over-all cost-savings.

Roddis' new, production-line method produces doors always sealed under ideal conditions. The entire operation is automatically controlled. Special Roddis synthetic resin sealer is applied to the double-sanded, dust-free doors to an unvarying film depth on faces and edges. After drying, doors receive a third sanding... emerge satin smooth, with the tough, even undercoat vital to an A-1 final finish.

And Roddis *prime and seal* more than pays for itself. By shutting out dirt, fingerprints, and moisture during transportation and storage it saves costly, time-consuming cleaning and resanding on the job. You'll make it easy for builders and workmen to give you lustrous, beautifully finished doors by specifying *prime and seal* on all Roddis Doors.

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ONE SOURCE FOR ALL YOUR WOOD DOORS

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No more on-the-job reconditioning, with "scrubbed out" spots, scuffs or stains. Primed and sealed Roddis Doors make any type of final finishing practically foolproof.

No more "starved" door faces when you specify Roddis *prime and seal*. Factory processing assures smooth, even application and the full penetration of undercoat that is needed.

Send coupon for complete information!

RODDIS PLYWOOD CORP., Dept. AR-757, MARSHFIELD, WIS.

Please send additional facts and full specifications on Roddis primed and sealed Doors and Roddis custom finished Doors.

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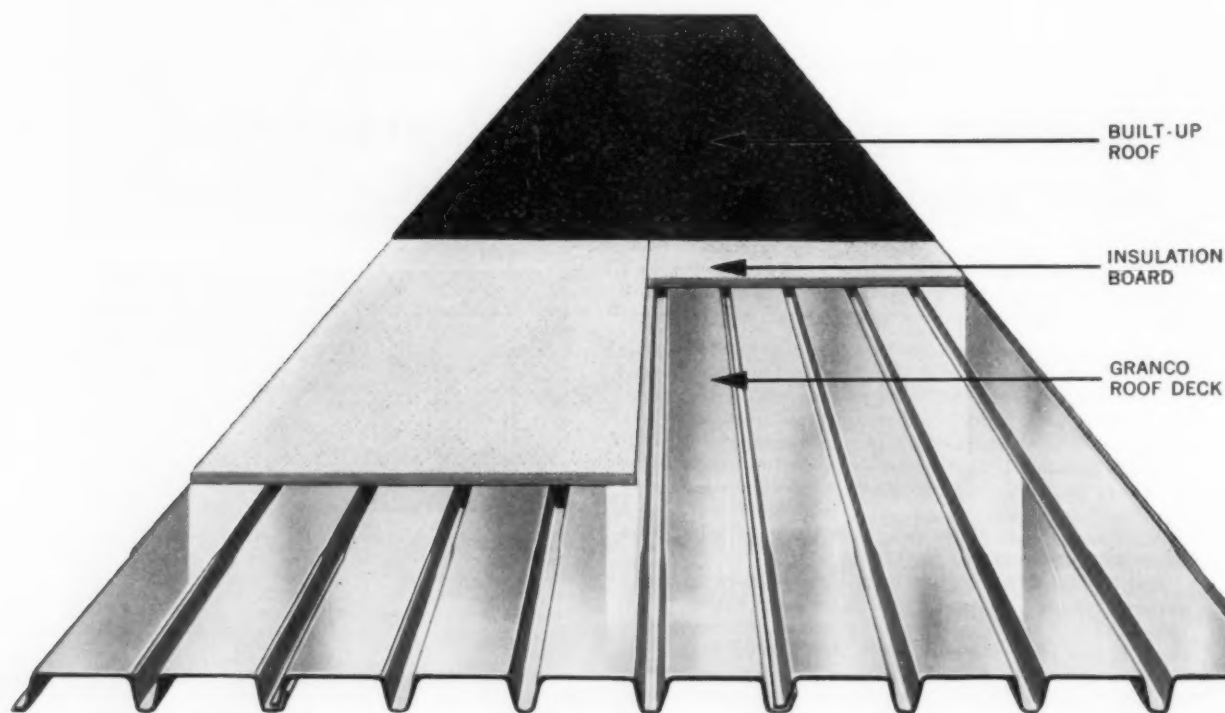
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NEW Granco Roof Deck!

SHEETS COVER 43 SQ. FT.!

NEW FLINT-HARD FINISH! UP TO 25% STRONGER!



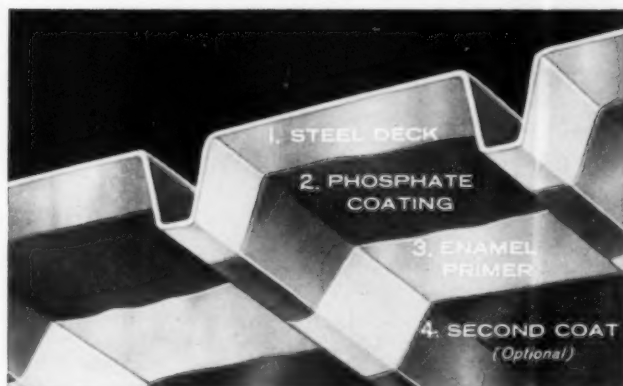
FOR FAST, ECONOMICAL ROOF CONSTRUCTION any time of year, nothing tops a Granco Steel Roof Deck system. Weld sheets to structural framing. Apply insulation board and built-up roof. That's all there is to it! Structures designed for Granco

Roof Deck often save 5¢ to 10¢ per sq. ft. over heavier type decks. And now, to improve the system, Granco Roof Deck has been completely modernized. Check the exclusive new features on the facing page. For more facts, see your nearest Granco representative.

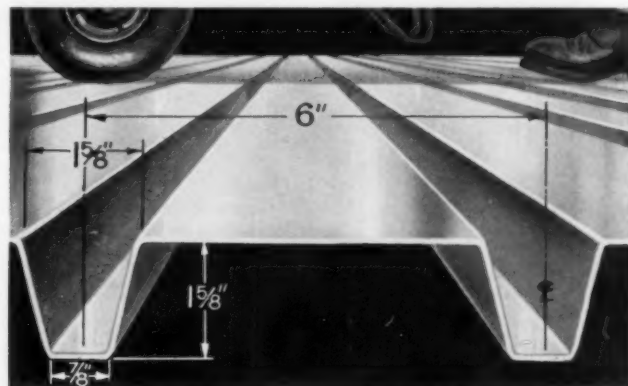


LONGER SHEETS . . . FASTER PLACING. New Granco Roof Deck sheets are available in sizes up to 21½ ft. long and cover up to 43 sq. ft. Greater length makes possible continu-

ous spans for stronger, more economical construction. Also means faster placing, more area covered per sheet, fewer laps and welds. New roof deck sheets cover 24 inches, easily adapt to all roof sizes.



TOUGH NEW FINISH STAYS ON. A thin phosphate coating, applied to clean sheets, protects metal and prepares it for painting. Then, rust-preventive battleship grey enamel is "flow coated" over the metal for an even finish. Baked on at 400° F. for 20 minutes, this durable flint-hard enamel adheres tightly, resists abrasion and chemical corrosion, protects metal years longer.



STRONGER . . . SPANS GREATER DISTANCE. Improved angular pattern with wider rib opening makes more effective use of steel, gives greater strength. This efficient new pattern helps sheets support wheelbarrows, welding machines and other heavy construction loads without bending or buckling. Wide rib openings also mean faster, easier plug welding from above.

Plus . . .

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New booklet describes and illustrates advantages of roof deck system and new features of Granco Roof Deck. Gives load tables, specifications, installation instructions and special engineering details on constructing eaves, hips, valleys, wall and roof openings. Lists Granco Roof Deck accessories. For your free copy, mail coupon now.



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BURT'S complete ventilator line includes a type and size to put air to work most efficiently and economically for your specialized needs. BURT'S engineering skill and know-how from more than half a century designing and building ventilators is your assurance of satisfaction. Your inquiry will receive prompt and qualified attention.



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MEMBER POWER FAN MANUFACTURERS ASSOCIATION

OFFICE LITERATURE

Stud Welding Design Manual

Describes and gives physical properties of various stud types with sections on stud selection, design and locating procedures. 24 pp. *Nelson Stud Welding Div., Gregory Industries, Inc., Lorain, Ohio.*

Evaluation of the Factor of Safety

... In *Structural Timbers*, Report No. 2068, explains strength and use considerations that limit serviceability of structural timbers, and gives suggestions for estimating the proper safety factor. *Director, U. S. Forest Products Laboratory, Madison 5, Wisc.*

Stage Lighting (AIA 31-F-25, 11-D-22)

Engineered Lighting and Control Equipment for the Modern School Stage, Bulletin SL-56, presents recommendations for the basic layout and selection of stage lighting and control equipment for schools. *Hub Electric Co., Inc., 2255 W. Grand Ave., Chicago 12, Ill.*

Motor Control Center

Bulletin GEA-6367A describes in detail the construction and application of General Electric's Type DA7093 general-purpose motor control center, with ratings, dimensions, installation data and guide form specifications. 24 pp. *Advertising & Sales Promotion, Distribution Assemblies Dept., General Electric Co., Plainville, Conn.*

Aluminum Extrusion Handbook

Contains sections on the use of aluminum extrusions for architectural, structural, truck and trailer, and industrial product applications. Includes full-size drawings of standard shapes, information on alloys, and data on fabrication and finishing. 130 pp. *Aluminum Div., Bridgeport Brass Co., Bridgeport 2, Conn.*

Wood Roof Trusses

Describes and illustrates typical designs for clear span wood roof trusses built with *Teco* connectors. 14 pp. *Timber Engineering Co., 1319 18th St., N.W., Washington, D. C.*

Day-Brite Buyers' Guide

(A.I.A. 31-F-2) Illustrated 72-page catalog (No. 60-C-6) contains detailed selection and installation data and price list for complete line of *Day-Brite* lighting equipment. *Day-Brite Lighting, Inc., St. Louis 7, Mo.**

Fabulous New Medical Sciences Building has MODERN VAMPCO ALUMINUM WINDOWS



GUY C. FULTON
Architect
ARNOLD CONSTRUCTION CO.
Contractors



Photos by Roy M. Green, Inc.

In the University of Florida's new medical sciences building, the J. Hillis Miller Health Center, VAMPCO Continuous Intermediate Projected Aluminum Windows have been used most effectively to provide full natural lighting and good ventilation as well as to accentuate the modern lines of the building itself. In the United States alone, today, over 7,500 schools and hospitals have VAMPCO Aluminum Window construction of one type or another. These versatile windows are available in casement, combination casement, awning, intermediate projected, window wall of varying sizes and thicknesses, heavy construction, glass block and custom-designed types. Find out how VAMPCO's special designing service can help you solve your unusual building problems most economically and efficiently . . . mail coupon below today!

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Current Sweet's Catalog

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VERY FINEST IN LIFELONG ALUMINUM WINDOWS

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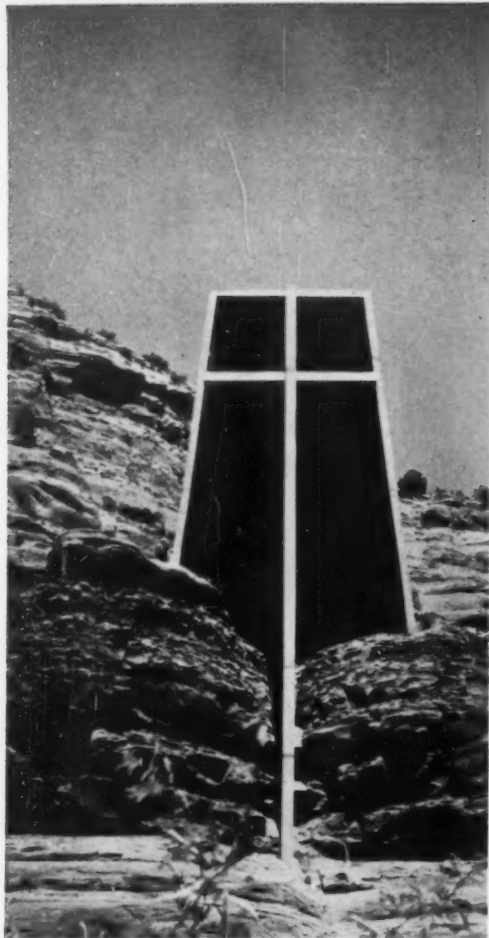
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- ☐ Send Light Construction Aluminum Window Catalog.

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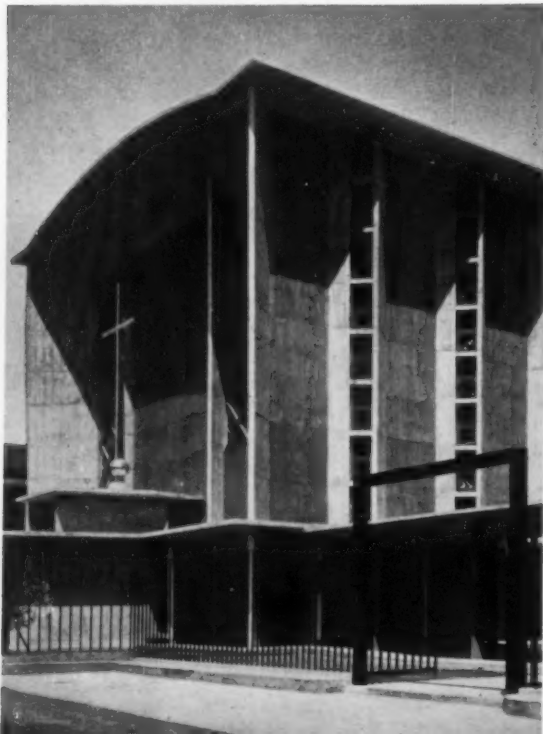
ADDRESS

CITY ZONE STATE



Chapel of the Holy Cross, Sedona, Arizona
Architects: Anshen & Allen
October 1956 issue of Architectural Record
Photographer: Julius Shulman

St. Anselm's Priory, Tokyo, Japan
Architects: Antonin Raymond & L. I. Rado
November 1956 issue of Architectural Record
Photographer: F. Morasawa



Brazos County, Texas, Courthouse and Jail
Architects: Cassill, Rowlett, Scott & Associates
January 1957 issue of Architectural Record
Photographer: Ullrich Menzel



Before
the judging...

ALL SIX FIRST HONOR **FOR PUBLICATION**



Middlesex Mutual Building Trust Office Building
Waltham, Massachusetts
Architects: Anderson, Beckwith & Haible
February 1957 issue of Architectural Record

House for Mr. and Mrs. Eliot Noyes
New Canaan, Connecticut
Architect: Eliot Noyes
Record Houses of 1957 (Mid-May issue) of Architectural Record
Photographer: Ezra Stoller





AWARD BUILDINGS WERE PICKED IN ARCHITECTURAL RECORD!

The six buildings shown here won First Honor Awards in The American Institute of Architects' 1957 Program of National Honor Awards "for exceptional merit in recently completed buildings."

Significantly, of these six top winners (from a field of 344 entries) *five were featured in Architectural Record before the A.I.A. awards jury met—the sixth scheduled for publication!**

A striking instance of the editorial alertness and

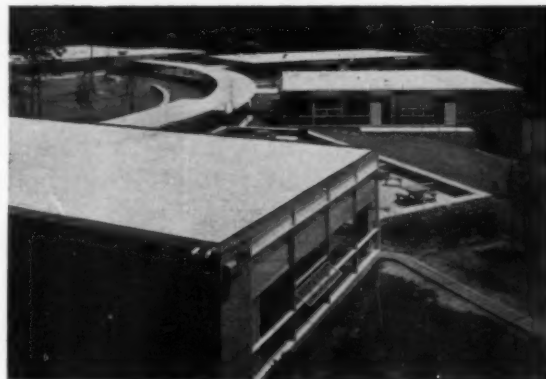
sure grasp of what is most significant in architecture that has enabled Architectural Record to enroll as subscribers *more architects and more engineers than any other magazine in its field.*

Striking instance, too, of why—for ten straight years—building product advertisers have placed more pages of advertising in Architectural Record than in any other magazine . . . 50% more pages than in the second place architectural magazine in the first five months of 1957.

More editorial reasons why architects and engineers have voted Architectural Record "preferred" in 96 out of 105 studies SPONSORED BY BUILDING PRODUCT MANUFACTURERS AND AGENCIES:

- the largest number of architect and engineer editors in the field—including five regular members of the American Institute of Architects
- most editorial pages (41% more than the second magazine in 1956)
- 37 editorial awards including 5 out of 6 awards to architectural magazines by the American Institute of Architects
- editorial content timed and balanced with the aid of Dodge Reports to be of top value to architects and engineers in terms of the work on their boards
- exclusive cover-to-cover editing specifically for architects and engineers.

**A 48-page reprint of Architectural Record's presentation of all six First Honor Award buildings is yours free if you write for it on your company letterhead.*



Edgemont Junior-Senior High School,
Town of Greenburgh, Scarsdale, New York
Architect: Warren H. Ashley
September 1956 issue of Architectural Record
Photographer: Joseph W. Molitor



ARCHITECTURAL RECORD

"Workbook of the Active Architect and Engineer"

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for a
"beautiful" job
of
distributing
air where
you want it!



Specify the NEW
Lima
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COMMERCIAL
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REGISTERS and GRILLES
Completely Adjustable




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BEAUTY

In air conditioning, complete air control is most important. Lima single and double deflection registers have horizontal and vertical face bars that can be easily adjusted to provide any air pattern desired.

You'll agree that the construction and finish of air conditioning grilles and registers are important too. Lima Registers have one-piece rigidity. All joints are welded and corners are reinforced for extra strength . . . no rattles in high velocity air streams.

Lima durable beige enamel finish is electrostatically applied for uniform coverage and protection and then baked on for lasting beauty. May be repainted if desired.

Write today for literature and specifications on the new Lima Flexi-Trol Commercial Air Conditioning Line.

***Lima* REGISTER COMPANY**

1794 N. Cable Rd., Lima, Ohio

sold exclusively through wholesalers and manufacturers  

THE RECORD REPORTS NEWS FROM CANADA

(Continued from page 46)

Fleury, Toronto; George D. Gibson, Toronto; William A. Watson, Belleville; Lawrence J. Green, Winnipeg; John E. Hoskins, St. John's; Hugh P. Illsley, Montreal; Victor E. Meech, Lethbridge; Gilbert Parfitt, Winnipeg; Harold N. Semmens, Vancouver; Hugh A. I. Valentine, Montreal; and Gerard Venne, Quebec City.

WITH THE R.A.I.C.

The Ontario Association of Architects announces formation of a new Chapter, in Sarnia. Charter members are William E. Andrews, Norman B. Forbes, Lloyd E. Hillier, Robert D. Irvine and Ian J. Rutherford. . . . The Ottawa Chapter's May meeting was held at the Red Door Restaurant. Highlights of the R.A.I.C. program for the "Golden Jubilee" Assembly were outlined by G. B. Pritchard, chairman of the committee in charge. . . . Newly elected officers of the London Chapter are Ronald Murphy, chairman; Robert P. Buist, vice chairman, Howard Falls, secretary, and Gordon Glover, treasurer. . . . Members admitted to practice at a recent meeting of the O.A.A. Registration Board are Walter Agius, Robert W. Anderson, Kenneth S. Avery, Hugh W. Blachford, A. W. Cluff (he and Mrs. Cluff are the only husband and wife team in the association), M. R. Grant, William C. Karleff, W. E. Keenan, K. J. Kossak, William J. Moffet, I. H. Petroff, Uno Prii, R. G. Robbie, Paul Schoeler, Keith C. Spratley, Colin D. Vaughn and Richard C. S. Wise. . . . New officers and councillors of the Manitoba Association of Architects elected recently are Norman C. H. Russell, president; George A. Stewart, vice president; and Morley Blankstein, Charles Faurer, R. Bryan Ross, James Searle, Roy Sellors, Earle G. Simpson, Ralph L. Thompson, Eric W. Thrift and J. T. L. Ward, councillors. Mrs. Douglas Chevrier remains executive secretary. Official association representatives to the R.A.I.C. are Messrs. Russell, Simpson, Stewart and Thompson. . . . The Province of Quebec Association of Architects has invited its members to display their work at an exhibition to be sponsored by the Clergy and Religious Institutions Suppliers Association at the Show Mart, August 5-8.



HI OUT
PUT

Wheeler HI-OUTPUT FIXTURES deliver more light per foot of lamp length!

HI-OUTPUT "D-8500" LINE FIXTURES by Wheeler—
designed for use with 100 watt and 60 watt rapid start lamps operating at
800 MA.

Diffuser apertures provide a small upward component of light to relieve
severe brightness contrast . . . and allow for heat dissipation.

Wheeler "D-8500" Hi-Output Fixtures are ideally suited for medium to high
mounting applications.

Ask your electrical wholesaler — or write

Wheeler Reflector Company

DIVISION OF FRANKLIN RESEARCH CORP.

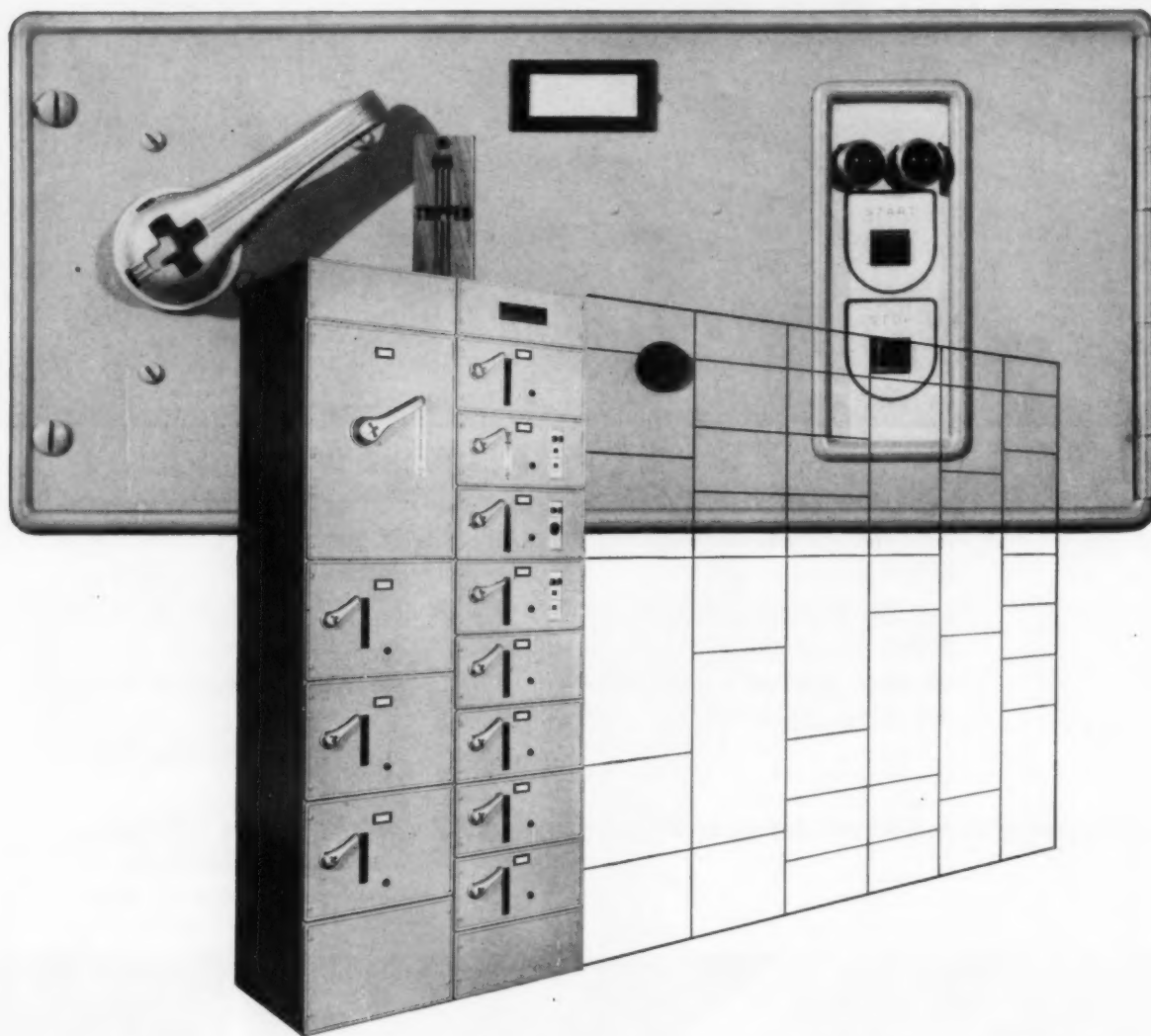
275 Congress Street, Boston 10, Mass.



Installation—Ucinite Div. of
United-Carr Fastener Corp.

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LIGHTING —
the efficient,
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way to solve all
your lighting
requirements
at one time . . .
from one source!

Distributed Exclusively through
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New 9 $\frac{1}{3}$ -inch control center units mean greatest flexibility

Westinghouse control centers with 9 $\frac{1}{3}$ - and 14-inch interchangeable modular units provide for expansion needs

It's impossible to foresee how big a plant will be ten years from now. But you can be ready for future growth with the Westinghouse control center. It will be ready to meet whatever demands are made on it for expansion or modification.

The clean, modern design is made for tomorrow. It's easy to lay out, completely interchangeable. New 9 $\frac{1}{3}$ -inch units save valuable plant space.

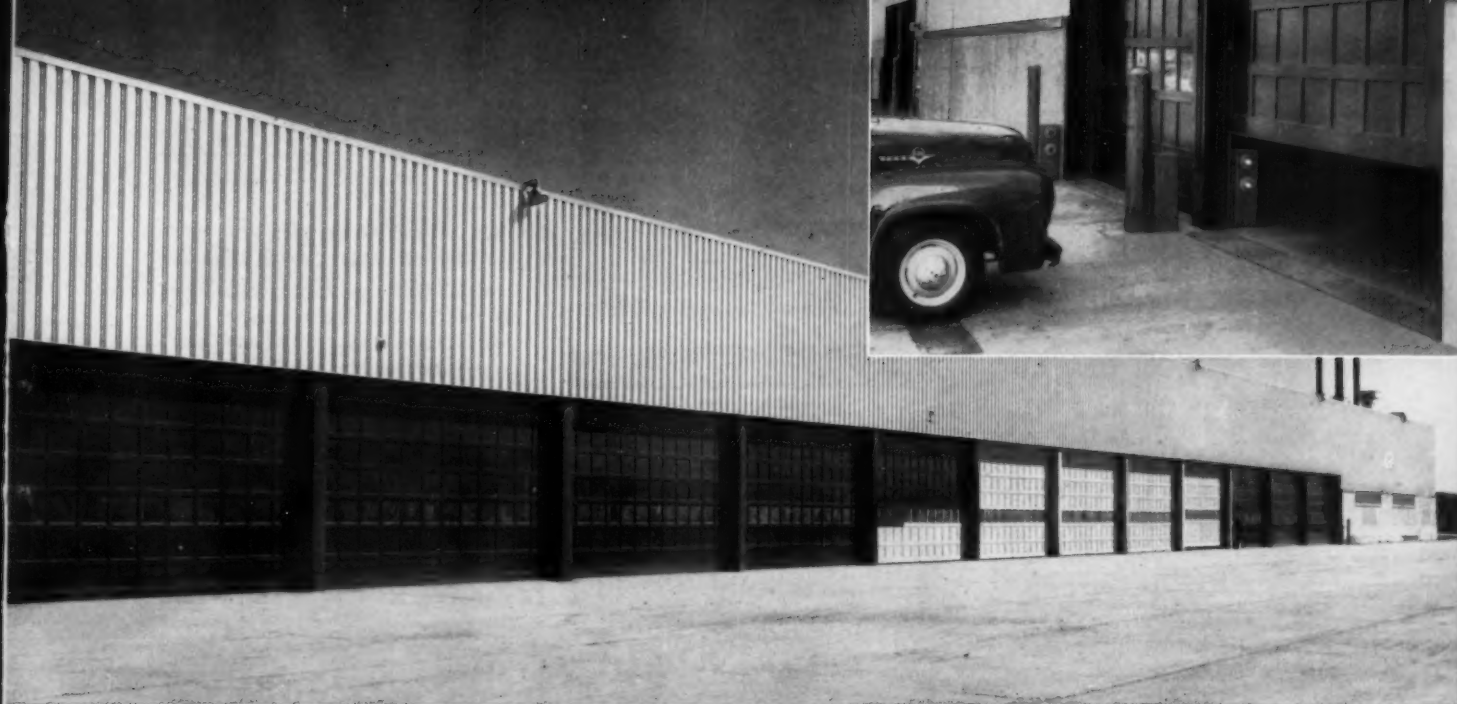
Available in both indoor and outdoor types, "walk-in" or "non-walk-in".

To see how easy it is to plan and specify industry's most advanced control center, contact your Westinghouse sales engineer. Or write Westinghouse Electric Corporation, 3 Gateway Center, Pittsburgh 30, Pennsylvania. Ask for B-6722.

J-21943

YOU CAN BE **SURE**...IF IT'S Westinghouse





**FORD MOTOR COMPANY'S NEW LINCOLN ASSEMBLY PLANT USES 38
LARGE CRAWFORD MARVEL-LIFT INDUSTRIAL DOORS—with remote
control or automatic control by the vehicles using them**

JOB DATA

Client:
Lincoln Division,
Ford Motor Company

PROJECT

Lincoln Division Final Assembly,
Body Painting and Finishing Plant,
Novi, Michigan.

ARCHITECTS & ENGINEERS

Smith-Hinchman & Grylls, Inc.,
Detroit.

CONTRACTOR

W. E. Wood Company,
Detroit.



CRAWFORD DOORS
sold and installed by
Crawford Door Sales Company
of Detroit.
L. G. Stedman, Jr.,
Sales Manager

The new Lincoln Assembly Plant at Novi, Michigan covers approximately 27 acres and has a maximum height of 60 feet. Construction is precast concrete panels and aluminum panels clipped to structural steel framing members. A total of 38 Crawford Marvel-Lift Industrial Doors are used, all with quarter-inch clear wire glass in Section 3 and with rubber astragal on the bottom rail. All doors are equipped with operators. The twelve doors shown above are 24'0" x 14'0" and are on the loading dock which accommodates all incoming truck-delivered materials. These are operated by remote controls.

Sixteen other doors are automatically controlled by the vehicles using them. Inbound vehicles pass over a rubber treadle in the concrete apron actuating an electric operator which opens the door; the door remains full open while the vehicle breaks and then clears an electric eye immediately inside the door opening; an adjustable timing device then closes the door. A vehicle following immediately automatically causes the door to hold full open until it also has cleared. Outbound vehicles reverse this process. Doors are equipped for chain hoist operation in case of power failure.

If you have a door project or problem we'll welcome your inquiry and it will get quick, intelligent attention. Architects, write for a complete file of Crawford literature. Crawford Door Company, 204-20263 Hoover Road, Detroit 5, Michigan.

Crawford Door Company has plants in 10 cities in the U. S.; warehouses in 110 cities; Sales and Service everywhere. In Canada, F. Fentiman & Sons, Ltd., Ottawa, Ontario.

CRAWFORD MARVEL-LIFT INDUSTRIAL DOORS

Wood and Steel . . . All types of control including full automatic . . . for all types of industrial buildings

Your draft problems take Wings

when you install
modern induced draft



IN SCHOOLS



IN CHURCHES



IN APARTMENT HOUSES



IN RESTAURANTS & MOTELS

1. Eliminate high stacks—
save on capital investment

2. Save fuel

3. Give more comfortable
heating

4. Improve architectural
lines

ALSO WIDELY USED IN MODERN INDUSTRIAL BUILDINGS

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L. J. Wing Mfg. Co.,
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AR-7

Please send copy of Draft Inducer Bulletin I-57.

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THE RECORD REPORTS

JAIL STANDARDS ADOPTED BY NATIONAL JAIL ASSOCIATION

A three-phase jail system is advocated by the National Jail Association in its Jail Standards adopted at last year's annual meeting and published in a recent issue of the *American Journal of Correction* (135 East 15th Street, New York 3, N. Y.).

Ideally, the standards emphasize, separate facilities will be provided for the three basic functions the jail system must perform: 1. serving as a depository for the use of all arresting officers and as a clearing house to release as many offenders as possible on bond or personal recognizance to appear at an appointed time and place for a hearing (this is the "lockup" function); 2. keeping "in safe and secure custody" all those who cannot properly be released while they await trial, those held for the grand jury, those convicted and being investigated before sentencing, and those sentenced and awaiting transfer to prisons or work-houses or farms (this is the ordinary concept of "jail"); 3. keeping in custody and providing a program for those sentenced to jail terms.

As "only the large units of government will have enough prisoners to justify the three-phase programs operated separately," the National Jail Association advocates "state-wide jail supervision with authority to enforce adequate jail standards and state-operated institutions with capacities for short-term prisoners limited to 500. Such institutions would provide work, recreation and simple educational programs . . . and serve to get short-sentenced prisoners out of jail."

Sections on "building" and "equipment" provide considerable detail on site problems and on planning and structural requirements of a modern jail building. Some quick quotes on various topics:

"Must be large enough to care for peak loads and built with at least a ten-year projection. . . . It is never wise to make the jail a part of a multipurpose building, for to do so the projection must be for a period much greater than ten years, which may result in far greater capital outlay. . . . In jails of less than 100 population, space should be in individual cells. . . . In jails with populations of more than 100, dormitories can be justified for 30 to 60 per cent of the population. . . ."

(More news on page 324)

NEW 24-PAGE

Steam Coil Bulletin

INCLUDES:

- Capacity Data and Ratings
- Coil Selection Method
- Dimensional Data

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Transfer Equipment since 1925

MARLO COIL COMPANY
6135 Manchester, St. Louis 10, Missouri

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This water closet does not disturb your peace of mind

The famous Case time-tested Non-Overflow One-Piece water closet
with the whispering flush...produced in 32 decorator colors and spark-
ling black and white. Ask your Case wholesaler or write:*

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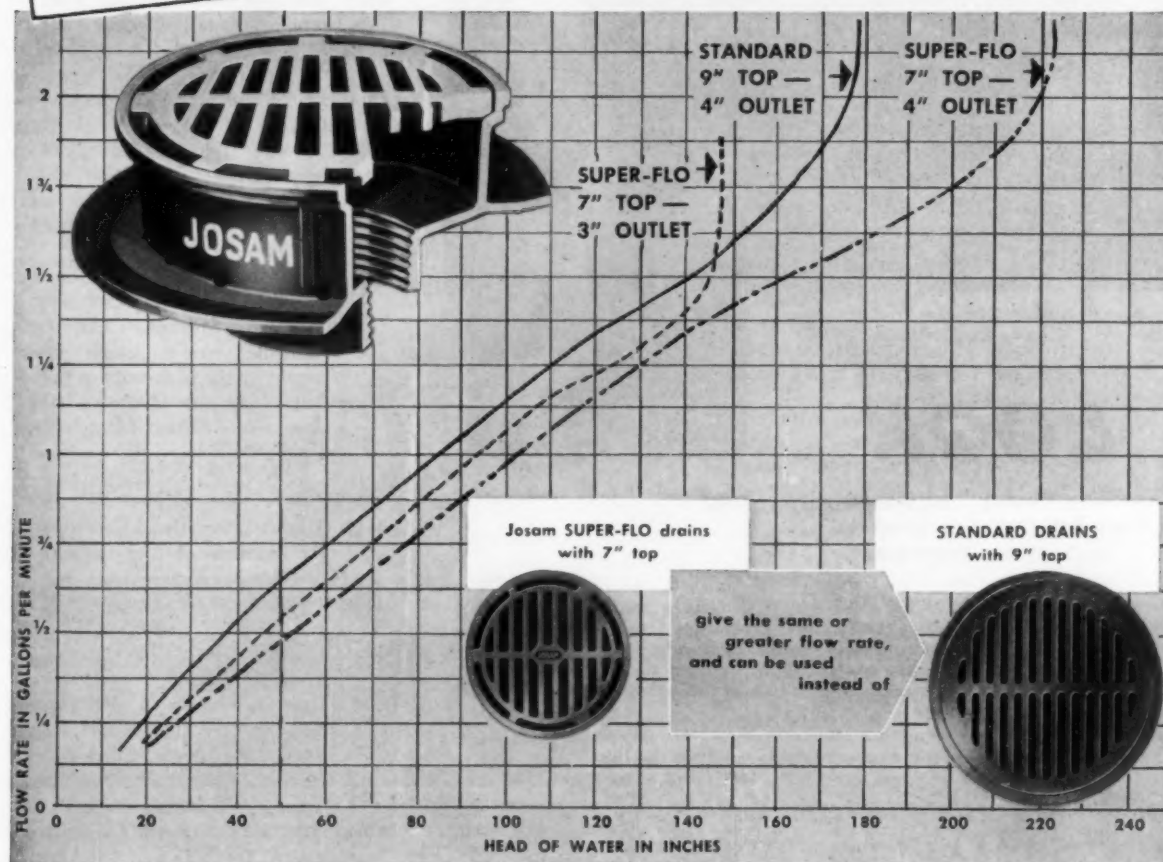
CASE MANUFACTURING CORPORATION

33 MAIN STREET, BUFFALO 3, NEW YORK

it costs no more to
have the... **VERY BEST**

Josam SUPER-FLO FLOOR DRAINS

prove higher efficiency
in comparison tests!



• This is the drain that is so advanced in design . . . so different from ordinary drains . . . that it sets entirely new standards for drainage.

JOSAM "SUPER-FLO" is the only drain with additional slots around the perimeter of the grate which permit a greater flow rate (GPM) into this drain than in standard type floor drains of the same size or even larger. Water flows away faster since it drains at the outside edges of Super-Flo drains instead of only flowing into the center portion of ordinary drains. Thus, a "SUPER-FLO" drain of a smaller top size can

be used to service the same drainage condition as a larger type standard drain. There is no need to employ drains with large tops when JOSAM "SUPER-FLO" drains with smaller tops and very often smaller outlet sizes can be utilized to do a more efficient job at less cost. Other extra features offered in "SUPER-FLO" drains are greater sanitation and wider adaptability in installation which unquestionably make them the very best floor drains on the market today. In floor drains, you use the best when you use JOSAM "SUPER-FLO".



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Fryeburg Academy Gymnasium, Fryeburg, Maine
Architect: Alonzo Harriman



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At Why Hussey "All Closed" Deck Roll-Outs Are Specified By So Many Architects

Hussey "Closed Deck" Roll-Outs are safer. There are no openings through which spectators can fall or drop things. Fire hazards are reduced because litter cannot collect under the stands. Special construction prevents end and side sway. Hussey "closed deck" extra safety features justify lower over-all public liability insurance rates.

Hussey "Closed Deck" Roll-Outs are more comfortable. Leg room is scientifically designed for maximum relaxation within the limits of sitting positions possible. Women, especially, feel more at ease in "closed deck" seats.

Hussey's full 16 $\frac{1}{4}$ " footboard insures that every size foot rests entirely on a solid base with room to spare. "Open Deck" 9 $\frac{1}{2}$ " footboards are so narrow any shoe larger than a woman's size 5 dangles in space. This is uncomfortable and an accident hazard, particularly with high heeled shoes.

Hussey "Closed Deck" Roll-Outs cut janitorial costs. By actual test Hussey "closed deck" seats can be swept 25% faster. Time consuming cleaning under the stand is eliminated. Seats can be closed immediately because there is no trash on the floor to jam the wheels. The floor remains clean for dancing.

*That's why nationally recognized school architects
"Specify" Hussey Closed Deck Roll-Out gym seats*

For Further Information Phone Collect

SEE SWEET'S CATALOG 231/HU FOR "SPECS"



HUSSEY MFG. CO., INC.
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Other Hussey Products: Portable and Permanent Steel Grandstands and
Stadiums — Steel Landing Piers — Swimming Floats — Diving Boards

THE RECORD REPORTS

(Continued from page 24)

ON THE CALENDAR

July

- 8-10 The 58th annual meeting, American Society of Landscape Architects — Sheraton Palace Hotel, San Francisco
- 10-13 British Architects' Conference — Oxford
- 27ff Eleventh Triennale di Milano; international exhibition of modern decorative and industrial arts and of modern architecture; until November 4 — Milan
- 29ff World Conference on Prestressed Concrete and third annual meeting of the Prestressed Concrete Institute; session jointly presented by the University of California and the Institute; until August 2 — Fairmont Hotel, San Francisco

August

- 5-12 Fourth International Conference for Students of Architecture — Copenhagen
- 11-15 First National Conference on Applied Heat Transfer, sponsored by Heat Transfer Division and Central Pennsylvania Section, American Society of Mechanical Engineers in Cooperation with College of Engineering and Architecture, Pennsylvania State University — University Park, Pa.
- 18-23 The 1957 Congress of Correction, annual convention of the American Correctional Association — Morrison Hotel, Chicago

September

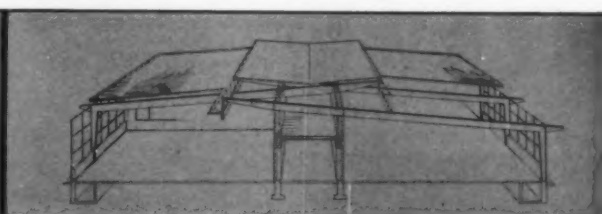
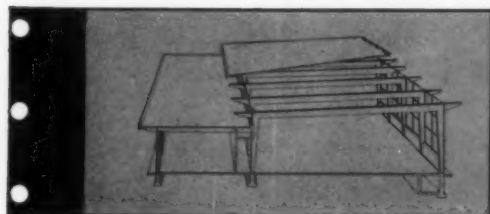
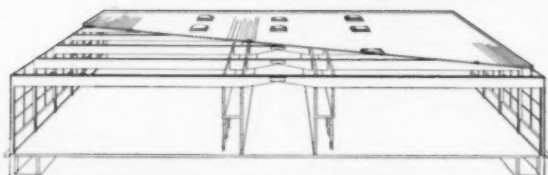
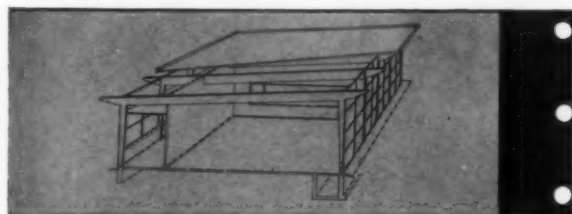
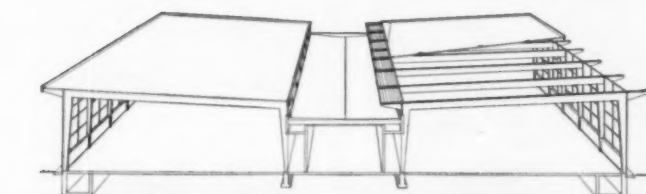
- IV International Architectural Exhibition and III International Contest for Schools of Architecture, sponsored by the São Paulo Museum of Modern Art in connection with its IV Biennial; through December
- 6-7 Western Mountain Regional Conference, American Institute of Architects — Jackson Hole, Wyo.
- 9-12 The New Highways: Challenge to the Metropolitan Region; a symposium sponsored by the Connecticut General Life Insurance Company — Bloomfield, Conn.
- 9-13 National Technical Conference, Illuminating Engineering Society — Biltmore Hotel, Atlanta

(Continued on page 328)

Use Framing of
Glulam Beams for

SCHOOLS

of Permanence,
Beauty and Economy



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Structural Members:

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Typical applications of glulam members by Timber Structures, Inc. are shown in the comprehensive brochure, "Timber Framing for Modern Schools". Get your copy from your Timber Structures representative, or fill-in and mail the coupon below.

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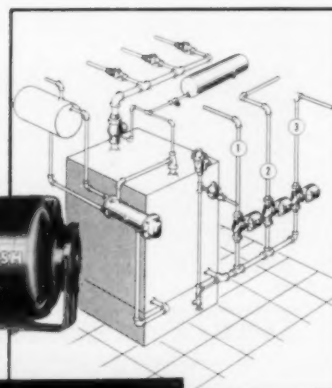
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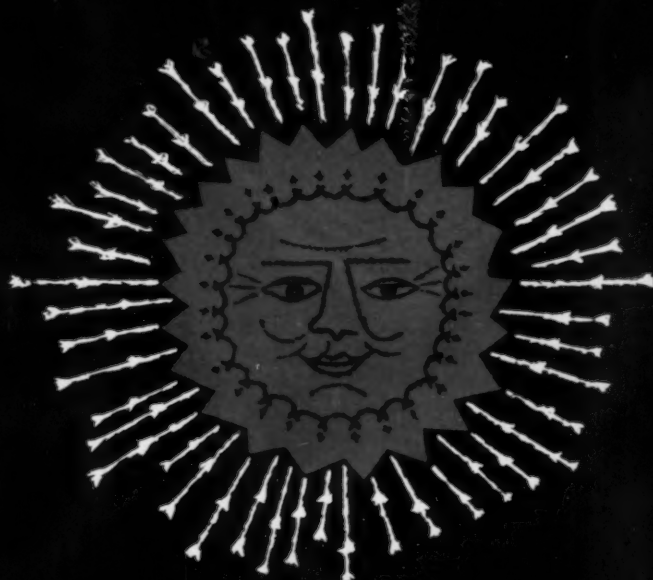
Thrush Water Circulator



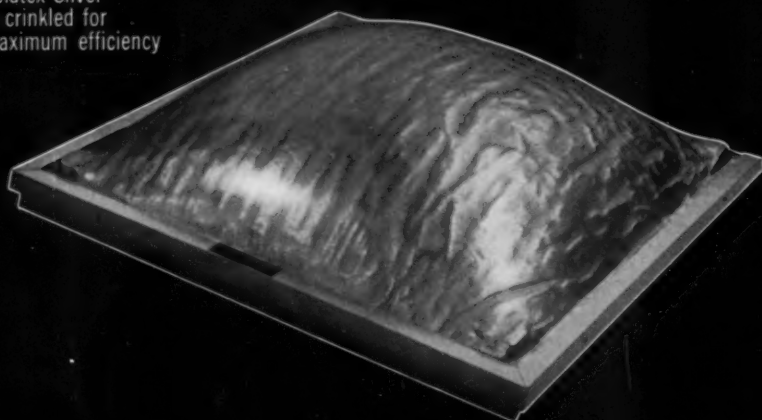
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NEW WASCOLITE REFLECTADOME* WITH SOLATEX SILVER



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is crinkled for
maximum efficiency



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*the skydome that does all 3
reduces heat . . . eliminates
glare . . . controls daylight*

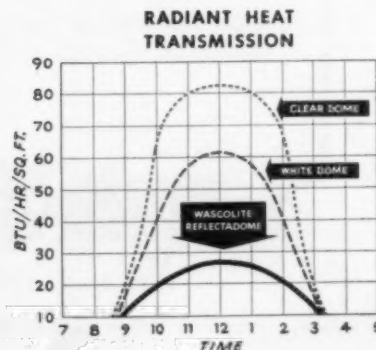
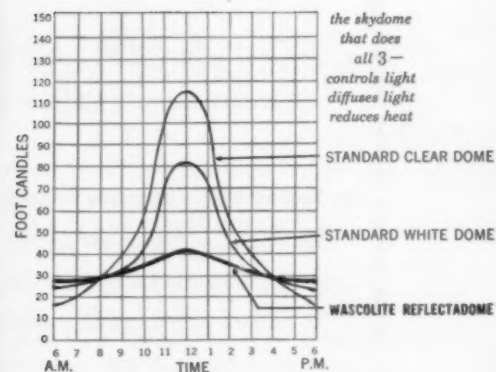
After years of development and research Wasco Products, the company that originated Skydomes, now offers you a revolutionary new overhead daylighting unit. It's Reflectadome, the one dome that reduces objectionable solar heat gain, eliminates glare and controls daylight — without supplementary light control fixtures.

Reflectadome's secret is Solatex Silver, a special material embedded (not laminated) right into the acrylic dome. Reflectadome produces a remarkably level light-curve to keep interiors evenly illuminated throughout the daylight hours for top visual performance.

Naturally, Wascolite Reflectadome features all the improved functional advantages of the Wascolite Skydome. Solatex Silver embedments are available only from Wasco, so specify Wascolite Reflectadome by name.

Write immediately for full details on exciting new Reflectadome, the one Skydome that does all 3! — reduces heat . . . eliminates glare . . . controls daylight.

*Trademark of Wasco Products, Inc.



THE RECORD REPORTS

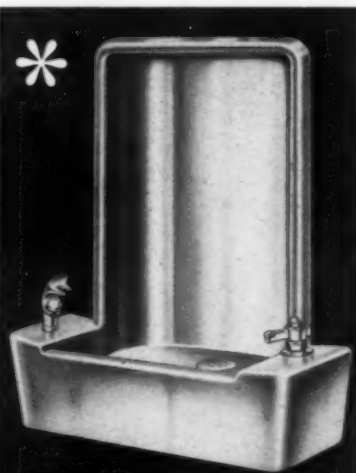
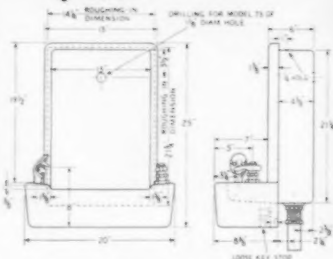
(Continued from page 324)

- 9-19 First International Seminar on Hospital Construction, sponsored by the International Hospital Federation and the International Union of Architects, with the assistance of the world Health Organization — Amphithéâtre des Polycliniques, Geneva
- 17-18 Fourth meeting of Building Research Institute Plastics Study Group; open to all interested

- B.R.I. members — St. Louis
- 19-21 Annual convention, New York State Association of Architects — Buffalo
- 19-21 New York Regional Conference, American Institute of Architects — Buffalo
- 22-25 Annual convention, American Public Works Association — Philadelphia
- 22-26 The 59th annual conference,

- American Institute of Park Executives — Leamington Hotel, Minneapolis
- 23-25 Sixth annual meeting, Standards Engineers Society — Hotel Commodore, New York
- 25-27 North Central States Regional Conference, American Institute of Architects — Faust Hotel, Rockford, Ill.
- 25-27 The 36th annual fall meeting, Producers' Council — Louisville
- 30th Annual Convention, American Hospital Association; through October 3 — Hotel Traymore, Atlantic City
- 30th Ninth Mental Hospital Institute; through October 4 — Hotel Cleveland, Cleveland
- 30th National Recreation Congress, annual meeting of the National Recreation Association; through October 4 — Long Beach, Cal.

fine plans demand **FINE DRINKING FOUNTAINS** by **HAWS**



Model 73, in stainless steel...

beautifully styled to match grand surroundings—with HAWS raised, shielded, anti-squirt head, and automatic stream control. Same distinctive design available in vitreous china (Model 77).

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OFFICE NOTES

Offices Opened

• Parker and Johnson, Architects, have opened offices at 720 Washington Ave., S.E., Minneapolis 14, Minn. Partners in the new firm are Leonard S. Parker and Roger T. Johnson.

• Burnham Engineering, electrical consultants in high frequency lighting, under the direction of R. D. Burnham, have established offices at 516 Langfitt St., Vermilion, Ohio.

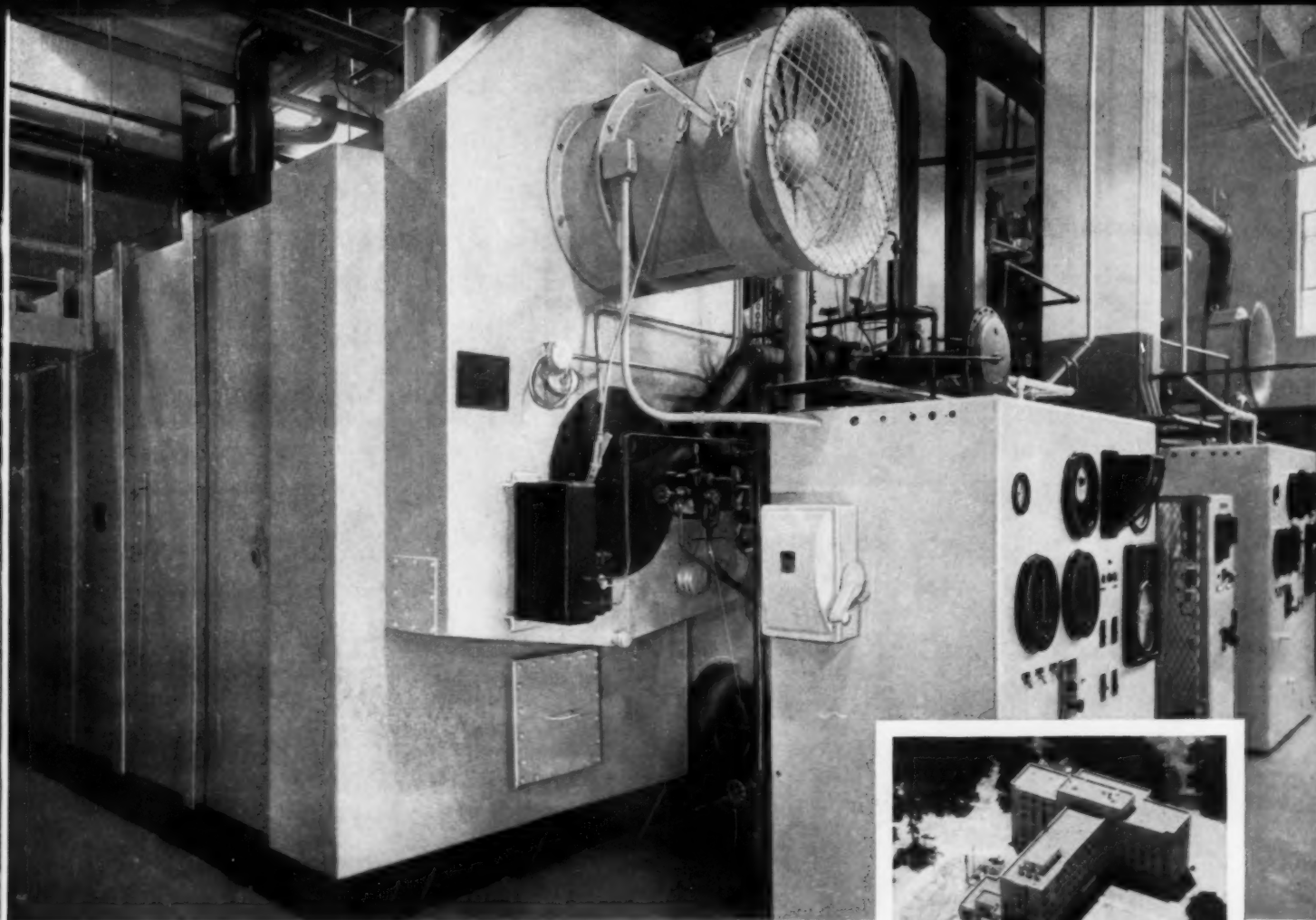
Firm Changes

• William F. R. Ballard, Architect, has announced that David F. M. Todd and Richard W. Snibbe have joined him as partners in the firm Ballard, Todd and Snibbe. Offices are at 123 E. 77th St., New York 21, N. Y., and at Stamford, Conn., and Montego Bay, Jamaica, B.W.I.

• Celli-Flynn, Architects & Engineers, of 335 Shaw Ave., McKeesport, Pa., have announced the admission into the firm as associates Mason H. Aldrich, Architect, R. Bruce Miller, Engineer, and Anthony J. Karpinski, Engineer.

• Lockwood Greene Engineers, Inc., Engineers-Architects, have announced the election of Edward B. Moebus and Samuel B. Roberts as vice presidents in the New York office, located at 41 E. 42nd St.

(Continued on page 332)



Dual unit installation of B&W Type FM Integral-Furnace Boilers at Barberton Citizens Hospital. Consulting Engineers: William E. Bodenstein and W. W. Shuster. Architects: Samuel Hannaford & Sons. Heating, Ventilating, Plumbing: T. O. Murphy Company.

Low Cost Steam Does Many Jobs

B&W 'PACKAGE' BOILERS SERVE BARBERTON CITIZENS HOSPITAL

Two B&W Type FM Integral-Furnace Boilers are the reliable source of plentiful, low cost steam that is put to many uses at Barberton Citizens Hospital, Barberton, Ohio. The gas-fired boilers, which can also use oil as a stand-by fuel, are automatically controlled to operate under minimum supervision.

Combined Capacity of the two units is 41,000 lbs of steam per hr, enough to supply an additional wing, should one be erected in the future. Both are "package" boilers, completely shop assembled. They only required service connections after installation.

The 250-Bed hospital, with a total of 560 rooms, uses steam for heating, sterilizers, a restaurant serving 37,000 meals a month, and a laundry that can handle 13½ pounds of linen per patient per day.

Long Life, low maintenance, reliability, continuity of operation, and efficiency have been proved for B&W Integral-Furnace Boilers in hundreds of installations in institutions and industry throughout

the nation. They provide maximum capacity in small boiler room space, high fuel economy, and economical, fast steaming. They have built a reputation for quick response to wide load swings.

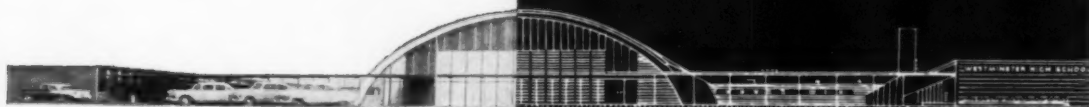
B&W Provides a single responsibility in design, engineering, manufacturing, installation, and service through a national network of plants and engineers. For detailed information on B&W Integral-Furnace Boilers, write for Bulletin G-76D. The Babcock & Wilcox Company, Boiler Division, Dept. AR-3, 161 East 42nd Street, New York 17, N. Y.

G-841-FM

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High School, Westminster, S. C.
Architect: Harold Woodward

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ECONOMICALLY
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Westminster High School was built for \$7.69 per square foot by using contemporary design and modern Wolmanized® pressure-treated timber products. Pressure-treated arches, posts, beams and decking afforded economical construction . . . a structure of decided aesthetic appeal. The glulam timber design effected a \$130,000 saving at a contract price of \$393,893 for the building.

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OPEN HOUSE AT BLUE ISLAND FOR **MUTSCHLER** CLOTHING CENTER

Administrators at Community High School in Blue Island, Illinois, were so proud of this new Mutschler installation they sent invitations to see their "Model Clothing Center" at an Open House. And it was enthusiastically admired by a large crowd.

If you are planning a new or remodeled school department, our sales engineers can likewise give you the benefit of their specialized knowledge . . . drawn from nationwide experience. Mutschler hardwood cabinetwork is especially designed for schools and has a heritage of quality since 1893.

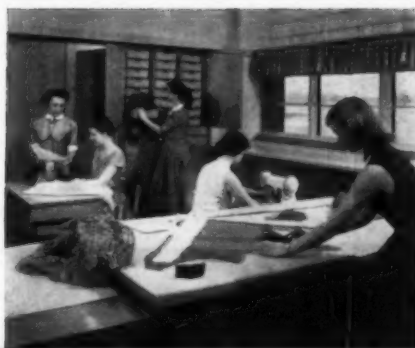
Send coupon below.

Model Clothing Center
Campus Building
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Chicago, Illinois

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MUTSCHLER BROTHERS COMPANY
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Please send address of our nearest Mutschler sales engineers.

name _____
school or firm _____
address _____
city, state _____
We are interested in:
new department _____; remodeled department _____

THE RECORD REPORTS

(Continued from page 328)

• Robert Kliegman, A.I.A., and M. Tony Sherman, A.I.A., have formed an association for design on the West Coast. Mr. Kliegman will maintain his offices at 8588 Melrose Ave., Los Angeles, and Mr. Sherman will remain at 1101 N.E. 79th St., Miami, Fla.

• Charles O. Matcham, F.A.I.A., announces that his firm will be known here-

after as Charles O. Matcham, Stewart S. Granger and Associates. Offices are at 1258 W. First St., Los Angeles.

• Nickum, Lamont and Fey, architects and engineers, is a new firm resulting from the merger of the engineering firm W. C. Nickum and Sons and Lamont and Fey, Architects. Principals are George C. Nickum, Daniel Lamont,

A.I.A., and Lester Fey, A.I.A.; offices are located at 71 Columbia St., Seattle.

• White, Noakes & Neubauer, Architects, have been succeeded by the firm Noakes & Neubauer, Architects and Engineers, composed of Edward H. Noakes and Donald J. Neubauer, with offices at 1145 19th St. N.W., Washington 6, D. C. Mr. White continues his practice under the firm name John Jamieson White & Associates at the same address.

• Wurster, Bernardi and Emmons, Architects, have admitted as associates in the firm George R. Kennaday, Geoffrey W. Fairfax, and Don E. Stover, A.I.A. The firm is located at 202 Green St., San Francisco.

New Addresses

Fox-Ballas-Barrow, A.I.A., 614 Savings Center Bldg., 110 E. Broadway, Missoula, Mont.

W. H. Lee, Architect, Room 934, Transportation Center, 6 Penn Center Plaza, Philadelphia 3, Pa.

McCoy-Blair, Architects, Building Industries Center, 180 S. Broadway, White Plains, N. Y.

Nelson Rice, Architect, 12401-C Venutra Blvd., Studio City, Cal.

George H. Sherwood, Architect, 101 Tremont St., Boston 8, Mass.

Harry Terry and Associates, Consulting Engineers, 156 W. State St., Trenton, N. J.

Geo. Washington, Structural Engineers; Washington & Sawyer, Inc., Surveyors; Washington & Mitchell, Inc., Consulting Structural Engineers; 405 Sansome St., San Francisco 11, Cal.

Harry L. Widom, A.I.A., 1047 Union Trust Bldg., Pittsburgh 19, Pa.

Correction

The world's first reactor was built under the grandstand at Stagg Field, University of Chicago, not at Oak Ridge as the article "For an Architecture of Nuclear Buildings," in the RECORD's March issue (page 182) stated. The Chicago graphite pile "went critical" in December, 1942, and was operated as the first self-sustaining nuclear chain reactor for three months. It was then moved to the Palos Park site of Argonne National Laboratory. The Oak Ridge graphite reactor began operation in November 1943 and is the world's oldest continuously operating reactor and the first to operate with a production potential.

(More news on page 336)

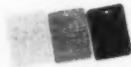
OVER 100 COLORS and PATTERNS

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... in a variety of metal mouldings or self-edged with Farlite. Widths from 24" to 36", lengths from 24" to 84", or 48" x 48" and 48" x 60". Two thicknesses, 1 1/4" and 1 3/4". Special sizes and shapes to order.



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AMERICAN ASSOCIATION OF SCIENCE BUILDING
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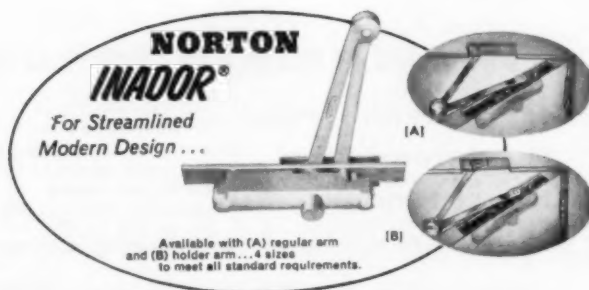
Architect: Faulkner, Kingsbury & Stenhouse, Washington, D. C.
Contractor: William P. Lipscomb, Washington, D. C.

A CLASSIC OF MODERN DESIGN WITH DOOR CLOSERS TO MATCH

As thoroughly modern as the latest findings in nuclear fission, this distinguished structure has been hailed as one of the most outstanding of recent additions to the Washington scene. To preserve complete harmony of design throughout, every detail including door closers was selected with utmost care.

Both Norton INADOR® and surface mounted

closers were extensively used, the latter on doors where concealment was not considered essential. Both are true liquid type closers with all the reliability, low maintenance and precision workmanship which the name NORTON always implies. For complete data on these and all other Norton models, consult the current catalog. Write for it today if you don't already have one.



NORTON
INADOR®

*For Streamlined
Modern Design...*

Available with (A) regular arm
and (B) holder arm... 4 sizes
to meet all standard requirements.

A complete line of Norton
Surface-type Closers is available
for installations where
concealment is not essential.



NORTON®
DOOR CLOSERS
Dept. AR-77 • Berrien Springs, Michigan



"Character, low cost, versatility...that's *Larch*"

—Mr. George A. Patton, builder, Nashville, Tenn.

"We've always found Larch distinctive for kitchens, dens, boys' bedrooms, yet economical enough for garages or basement workshops.

"It can also be finished in a number of ways to harmonize beautifully with other features of a home.

"Larch is a versatile wood all right. I'd recommend it highly."

For more information on any of the Western Pines, write to: WESTERN PINE ASSOCIATION, Dept. 209-U, Yeon Bldg., Portland 4, Oregon.

The Western Pines

Idaho White Pine

Ponderosa Pine

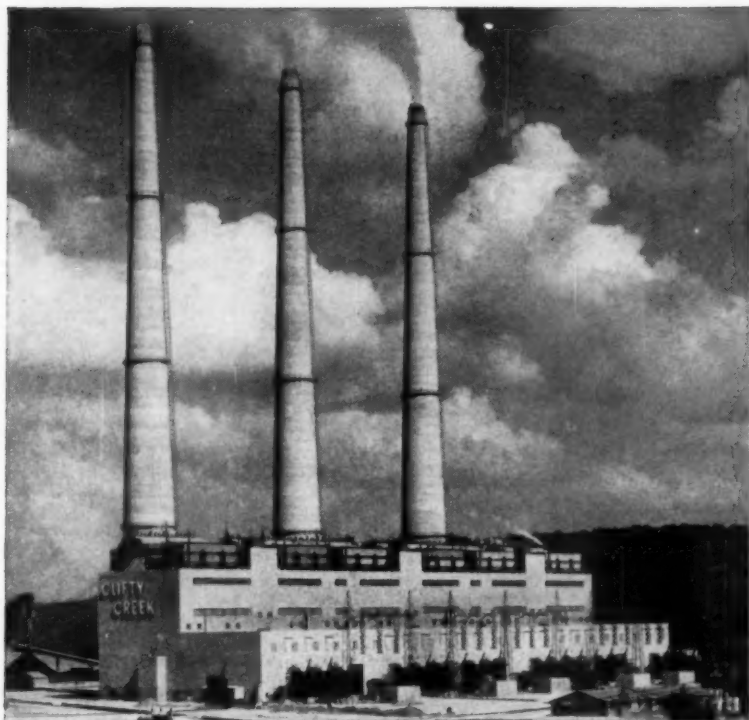
Sugar Pine

and these woods from
the Western Pine mills

WHITE FIR • INCENSE CEDAR
RED CEDAR • DOUGLAS FIR
ENGELMANN SPRUCE
LODGEPOLE PINE • LARCH

are manufactured to high standards of seasoning, grading, measurement

TODAY'S WESTERN PINE TREE FARMING GUARANTEES LUMBER TOMORROW



GIANT ON THE OHIO. Clifty Creek Plant at Madison, Ind., is the world's largest investor-owned power plant—with a 1,290,000 kilowatt capacity. The complex air conditioning requirements for this "big job" were met efficiently by General Electric Zone-by-Zone method.

General Electric **ZONE-BY-ZONE** Air Conditioning chosen for largest power plant ever built by industry

When air conditioning was selected for the giant Clifty Creek power plant, the engineers chose General Electric Zone-by-Zone method. Not only was this system most economical to install—but its flexibility permits a continuing economy in cooling costs.

General Electric Air Conditioning can be installed step-by-step, if desired, so that the investment at any time can be kept relatively low. Space presents no problem—ceiling-mounted units take no floor space and floor-mounted units may be stationed out of space. These smartly streamlined units are self-contained, trouble-free. And you'll always go right specifying General Electric products.

You owe it to your clients to consider General Electric Zone-by-Zone Air Conditioning in economically planning their requirements. General Electric Company, Commercial and Industrial Air Conditioning, 5 Lawrence Street, Bloomfield, N. J.

Progress Is Our Most Important Product

GENERAL ELECTRIC

■ In Canada, Canadian General Electric Co., Ltd., Montreal

EACH ZONE INDIVIDUALLY COOLED BECAUSE EACH UNIT INDIVIDUALLY CONTROLLED

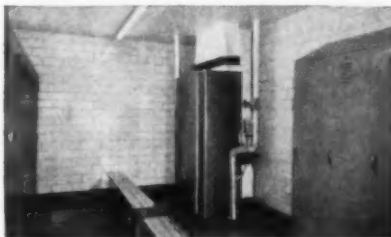
You air condition only the areas you need when you need it.



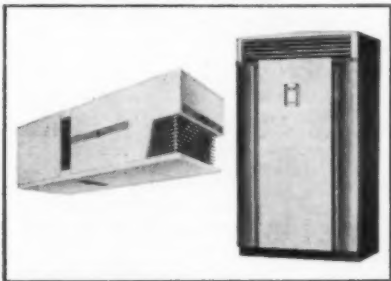
CONTROL ROOM at base of each of three stacks—tallest in the world—adequately air conditioned by 2 General Electric 10 ton Units. Third unit (located out of space) serves foreman's offices. Each of the 3 control rooms is air conditioned by General Electric Units in a similar manner.



CAFETERIA receives its cooling from a 10 ton and a 7½ ton unit. When area served is not in use, Zone-by-Zone Air Conditioners may be turned off without affecting other areas.



LOCKER ROOMS air conditioned by a 3 ton unit. In addition, all offices and laboratory have General Electric Zone-by-Zone Air Conditioning.



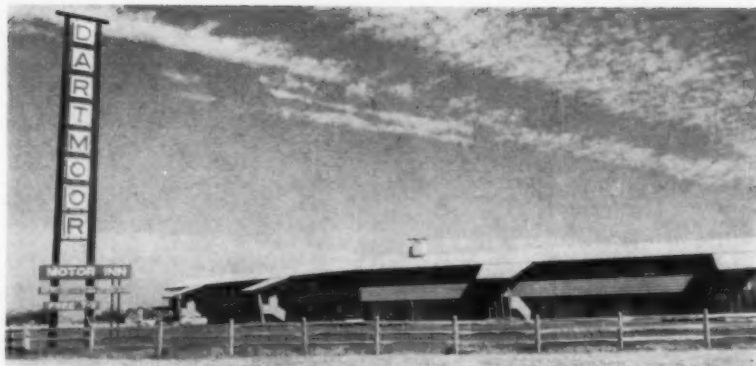
CEILING-MOUNTED UNITS take no floor space—available in 3, 5 and 7½ ton capacities, water-cooled; 3 and 5 ton air-cooled; **FLOOR-MOUNTED UNITS** in 3, 5, 7½, 10 and 15 ton capacities.

THE RECORD REPORTS

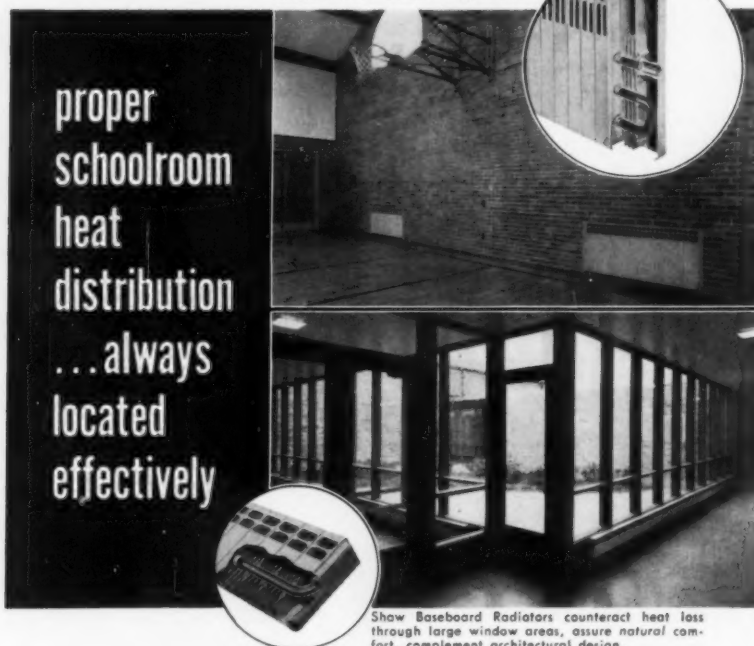
(Continued from page 332)

WISCONSIN ARCHITECTURE: HONOR AWARDS ANNOUNCED

The Dartmoor Motor Court at Fond du Lac, Wis., Irion & Reinke, architects, has received the First Honor Award in the annual architectural competition sponsored by the Wisconsin Architects Association. Five projects (shown on page 340) received Awards of Merit. All of the award winners were on exhibit



Shaw Panel Radiators, recessed for appearance and players' safety, assure natural thermal comfort in gymnasium.



proper
schoolroom
heat
distribution
...always
located
effectively

Shaw Baseboard Radiators counteract heat loss through large window areas, assure natural comfort, complement architectural design.

with SHAW RADIATORS

The rooms above, part of a recently completed Shaw school installation, demonstrate the successful application of two important rules for room occupant comfort: properly designed heat distribution units, and correct unit location.

Only Shaw has the radiator design standard that answers these requirements correctly. Shaw's exclusive, AIR-e-ATED Radiant Heat, a combination of radiant and convected heat, is rivalled only by Nature at her best. It is distributed evenly, in unvarying proportions, eliminating temperature extremes within the room.

Proper location under window areas or against cold walls is always possible because of Shaw's choice of models and wide range of sizes. Choice of same end or opposite end tapping further simplifies location, and offers opportunities for reduced piping costs. All models—baseboard or panel—are only 3" thick, operate on steam or hot water up to 150 psi.

Find out today how Shaw's exclusive advantages in design and construction can help you get the correct answers to your room heat distribution problems. Write for free literature, or contact the Shaw-Perkins Representative near you.

Write for new Shaw brochure
"Solving Modern Room Heat Distribution Problems"

SP-16



SHAW-PERKINS MANUFACTURING CO.
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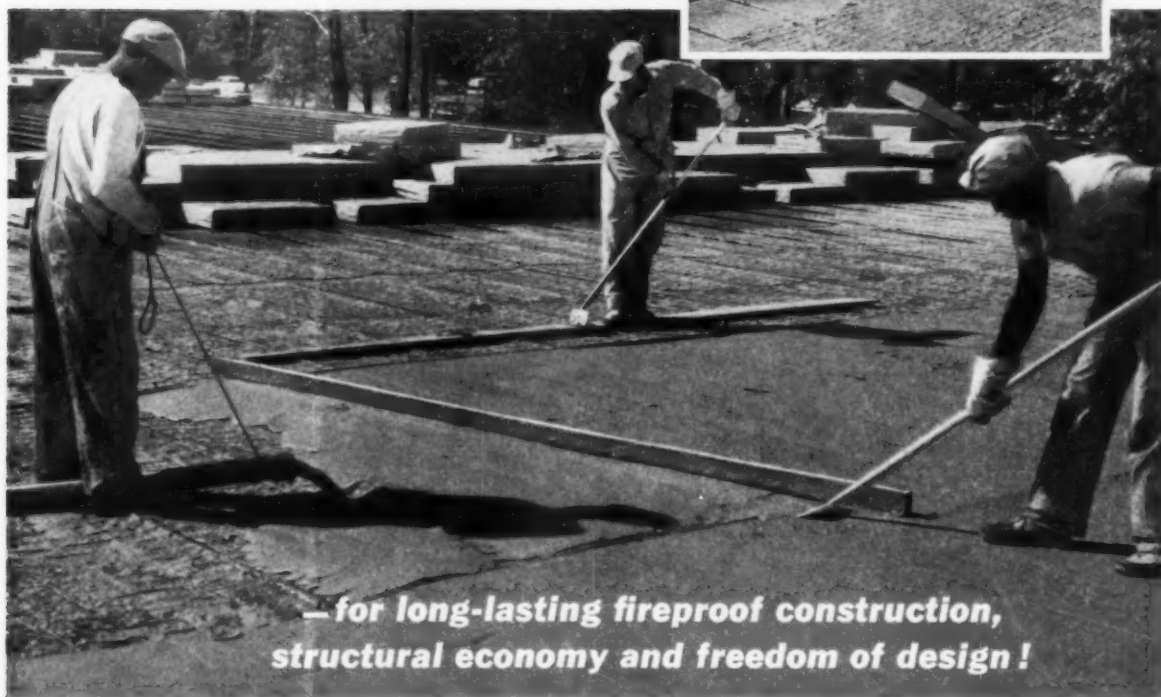
at the Wisconsin State Capitol in Madison for two weeks beginning April 3.

This year's competition attracted 17 entrants submitting 36 projects. Judging took place late in January and winners were honored at the annual banquet of the Association held in Milwaukee February 26-27. As always with the Association's annual competitions, there was wide interest throughout the state and extensive newspaper coverage. The winners continue to be publicized at various functions throughout Wisconsin for the rest of the year.

Members of the Jury of Award were architects Winston Elting of Chicago, Alden B. Dow of Midland, Mich., and Ambrose Richardson of Champaign, Ill.

(Continued on page 340)

"SPECIFY Firestopper" ROOF DECK



*— for long-lasting fireproof construction,
structural economy and freedom of design !*

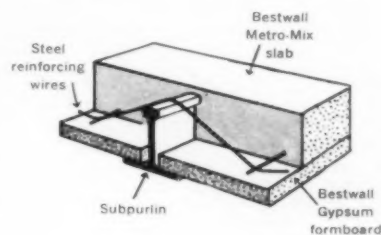
BESTWALL's Firestopper Roof Deck meets the highest requirements for firesafety, flexibility, economy and durability. This incombustible deck consists of steel subpurlins welded securely to the main steel structure, a permanent base of Bestwall Gypsum Formboard, welded steel mesh reinforcement, and poured-in-place Bestwall Metro-Mix gypsum concrete.

These components create a fully integrated roof deck. It's one light enough to permit appreciable savings in structural supports, strong enough

to meet all building codes or normal load requirements, and adaptable enough to be used on roofs that are flat, curved, sawtoothed, warped, or pitched as much as 45 degrees.

Speed of application is an important feature of Firestopper roof decks. An average crew can pour up to 30,000 sq. ft. in a day. And the Metro-Mix slab sets within an hour; so final builtup roofing can be applied without delay. Once in place, a Firestopper roof deck gives years of trouble-free service with a minimum of maintenance.

To get complete information about this efficient, fully fireproof roof deck, just contact your nearest Bestwall Certain-teed Sales Office— or write to us.



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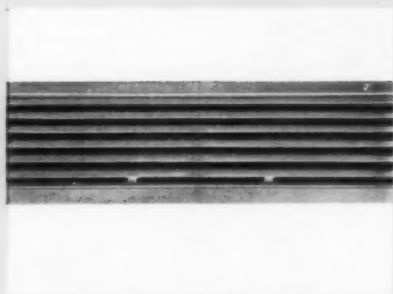
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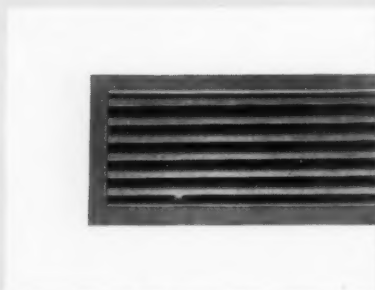
DALLAS, TEXAS
DES MOINES, IOWA
DETROIT, MICH.
EAST ST. LOUIS, ILL.

JACKSON, MISS.
KANSAS CITY, MO.
MINNEAPOLIS, MINN.
NIAGARA FALLS, N.Y.

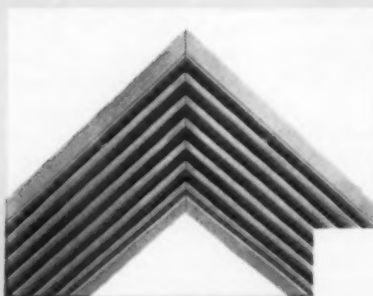
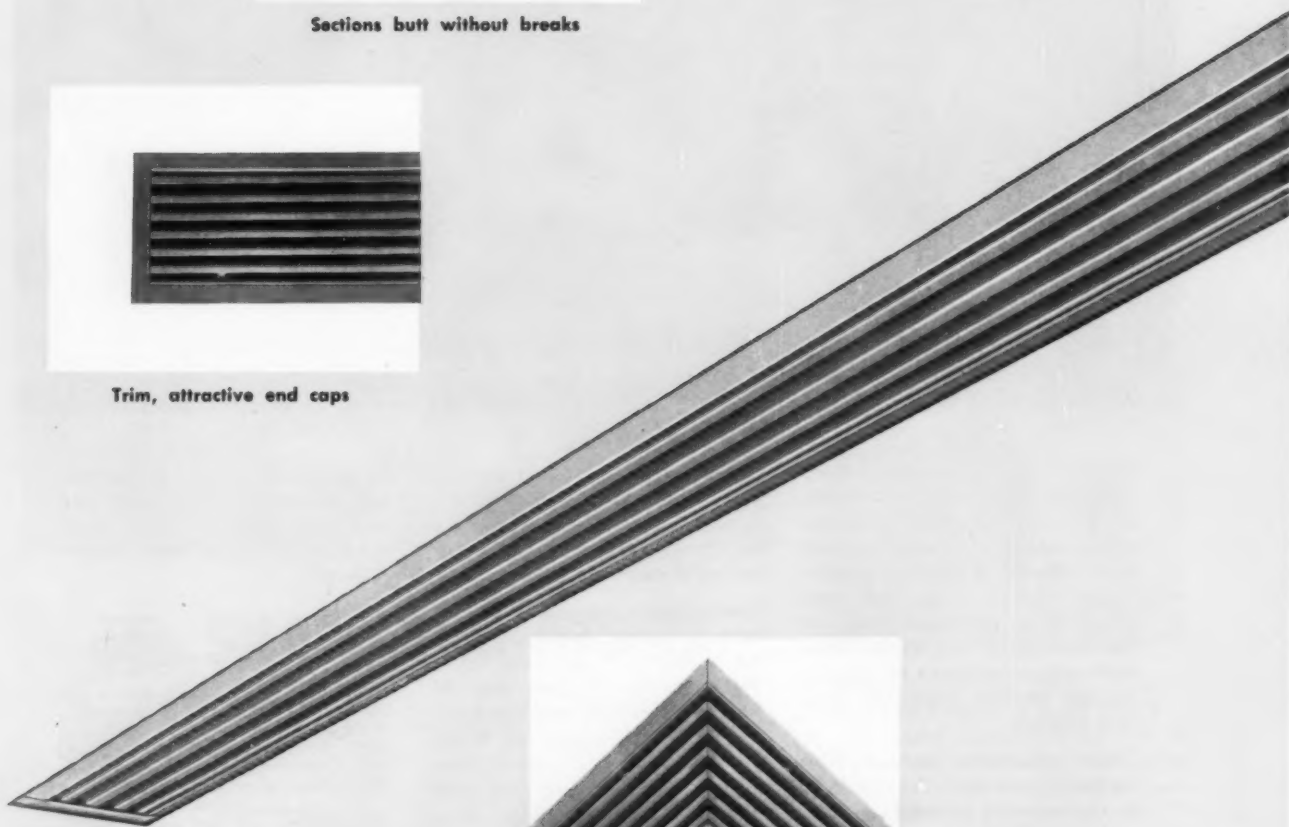
WILMINGTON, DEL.
RICHMOND, CALIF.
SALT LAKE CITY, UTAH
TACOMA, WASH.



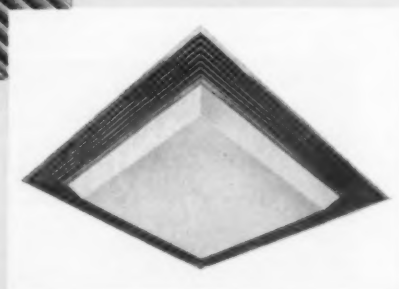
Sections butt without breaks



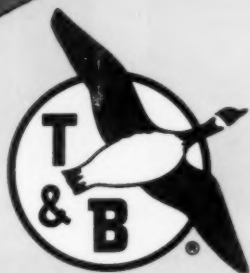
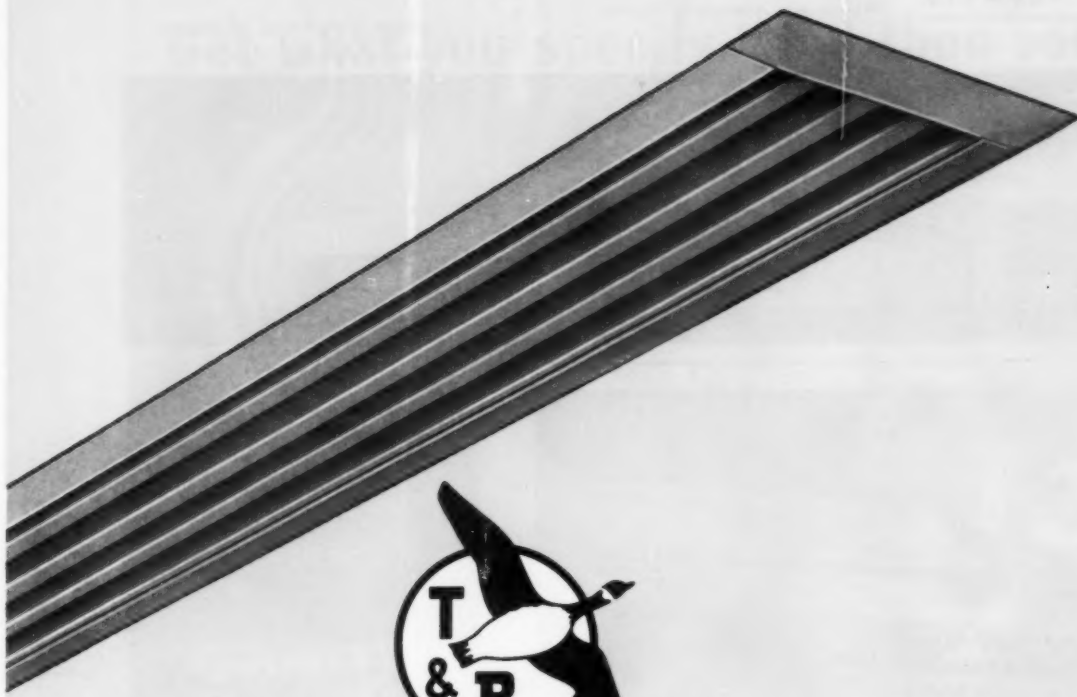
Trim, attractive end caps



Mitered inside and outside corner sections . . .



. . . ideal for installation with square light fixtures



LINEAR DIFFUSERS

preserve the clean-line symmetry of modern architectural design

For installation on ceiling or sidewall, Tuttle & Bailey Linear Diffusers are designed to maintain the functional straightline beauty of modern architectural concepts. Particularly effective when installed in continuous runs, individual sections butt neatly without breaks, and mitered 90° inside and outside corners permit extension of the clean-line symmetry on perimeter applications. A unique yet simplified method of installation

eliminates the need for screws in the margin of the diffuser. Units can also be furnished with a recessed plaster frame which means only the unbroken lines of the louvers are visible.

Tuttle & Bailey Linear Diffusers may be installed on either the supply or return portions of the system. They are available as one-way or two-way blow units in 18", 24", 30", 36", 48", 60" and 72" lengths.



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division of Allied Thermal Corp.



New Britain, Connecticut

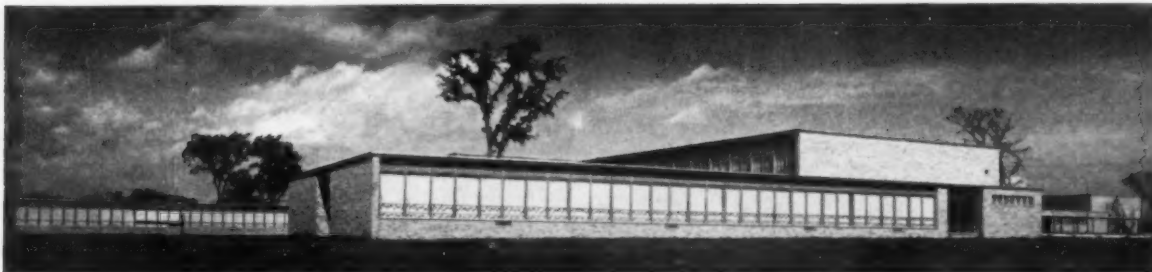
Today . . . write for Catalog No. 114.

THE RECORD REPORTS

Wisconsin Awards of Merit

(Continued from page 336)

Lutheran High School, Milwaukee;
Grassold-Johnson & Associates



and this is just part of the story!

Rilco laminated-wood beams not only helped keep construction costs low (speeded building time too) but added "such a warm and cheerful feeling" inside the finished school.

Also important is the fire safety afforded by Rilco beams. For laminated-wood members are slow to burn — won't collapse under high temperatures — allow time to save structure and contents.

For more information about how Rilco laminated products help make possible larger . . . more attractive . . . safer structures — still within the budget — write Rilco

Saint Joseph School, McPherson, Kansas; Architect: Robert Marr, McPherson, Kansas; Contractor: Frank Jackson, McPherson, Kansas. Rilco Wood Roof Deck of Western Red Cedar spans the 5 1/4" x 17 7/8" x 40' laminated beams spaced 14' o.c.



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Dells; John J. Flad & Associates



Masonic Grand Lodge Office Building,
Milwaukee; Fritz von Grossman



Dominican High School, Whitefish
Bay; Grellinger & Rose



Nathaniel Sample House, Madison;
Weiler & Strang & Associates



(More news on page 344)

Get what you specify "and then some" in Job-Proved **CELOTEX** Roof Insulation



Permanently efficient insulation . . . plus important on-the-job advantages: Rugged, hard-to-damage. Lightweight, easy to handle and apply. Clean-cut, snug-fitting edges insure flush contact at joints. A smooth, solid base for roofing felts. Ideal mopping surface, excellent bond. Exclusive Ferox® treatment protects effectively against dry rot.



Performance-predictable. In Celotex Roof Insulation, you get what you specify—and then some! You get the assurance of dependable performance—job-proved ability to stand up to time, wear, weather. Billions of feet have been used on buildings of all types, all over the country. Many of these installations have been in service for twenty to twenty-five years and are as sound and efficient as when applied. And, thanks to continued research and manufacturing advances, the improved product made today is better than ever.

FOR SPECIFICATIONS, SAMPLES, INFORMATION MANUAL, WRITE THE CELOTEX CORPORATION, 120 S. LA SALLE ST., CHICAGO 3, ILLINOIS



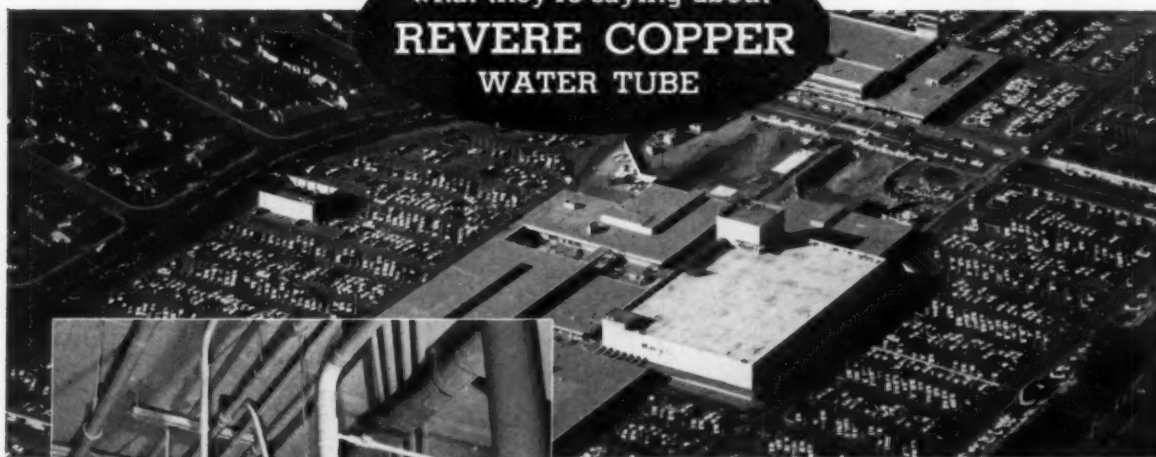
Wheeling and heeling hold no terrors. Celotex Roof Insulation takes heavy job and maintenance traffic in stride. Strong, rigid, crush-resistant, uniform density and thickness. Compresses only about 1% under load of 700 lbs. per sq. ft. No worry about punctures, breaks or depressions that become hidden weak spots under roofing.



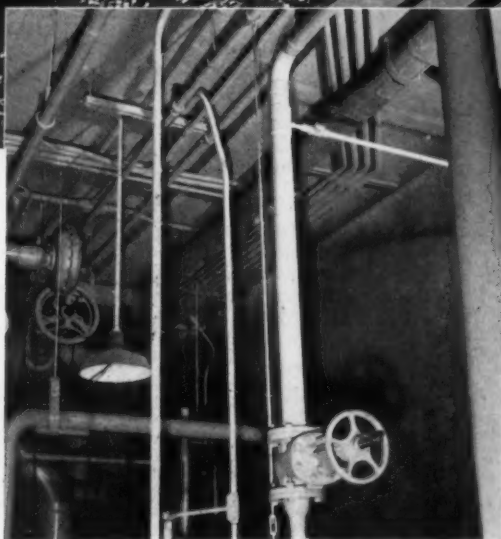
A type for every job requirement. PRESEAL: Asphalt-coated on both faces and edges for greater protection against moisture pick-up. CHANNEL-SEAL: Bevels on deck-side form network of channels for equalization of air and vapor pressure, providing extra protection against blistering and separation of felt and insulation, asphalt-coated. REGULAR: Uncoated Celotex board. Recognized standard where lowest cost insulation is required. All in a variety of thicknesses.

See 1957 Sweet's Architectural File, catalog 10a Ce.

what they're saying about
REVERE COPPER
WATER TUBE



HILLSDALE SHOPPING CENTER
San Mateo, California



THIS MAMMOTH CENTER containing over 800,000 sq. ft. of space employs 30,600 ft. of Revere Copper Water Tube from 1/2" to 4" diameter for its water and refrigeration lines. A section of the installation is shown above. Note neatness and compactness. Tube was furnished by Revere Distributor: TAY-HOLBROOK, INC. Architect: WELTON BECKET & ASSOCIATES. Both of San Francisco.

"There just isn't any other material that's as easy to work with or as economical to install"

Says, EDWARD P. HICKEY, Co-owner W. L. Hickey Sons, Inc., San Bruno, Sunnyvale, Sacramento, and San Rafael, Cal.

"Why take a chance on a material that can rust when a copper job costs no more"

Says, DAVID D. BOHANNON, President, David D. Bohannon Organization, San Mateo, Cal.

Mr. Bohannon, who has built over 20,000 homes in the San Francisco Bay Area, and is an originator and developer of the "California Method" of mass-production-on-the-job-site building techniques, continued, "In today's 'tight-money' market using copper water tube is more important than ever. For with copper I can give my clients a low-cost job without any sacrifice of quality."

"I've found that copper water tube, because of its solder fittings, and ease of prefabrication and handling, costs less to install than rustable materials," said Mr. Hickey, mechanical contractor.

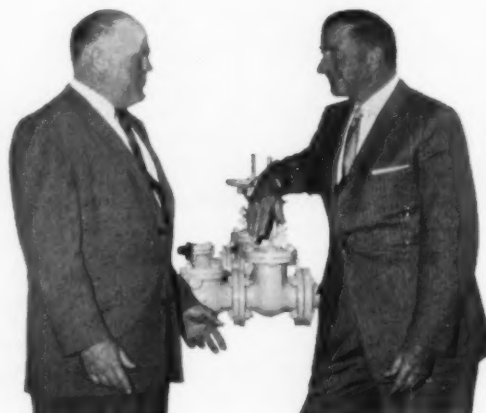
Builder, contractor, architect, engineer . . . all agree that there is no "or equal" when it comes to copper water tube for hot and cold water lines, radiant panel heating, air conditioning lines, underground service lines, drainage, waste and vent stacks. See your Revere Distributor for your needs.

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Mills: Rome, N.Y.; Baltimore, Md.; Chicago, Clinton and Joliet, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Brooklyn, N.Y.; Newport, Ark.; Ft. Calhoun, Neb. Sales Offices in Principal Cities, Distributors Everywhere.



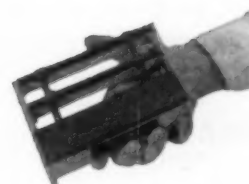
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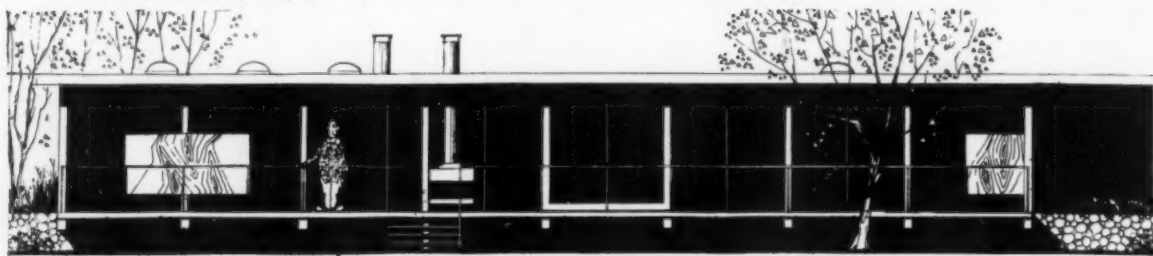
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THE RECORD REPORTS

(Continued from page 340)



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APPLIED CENTRIFUGAL BLOWER PRINCIPLES

QUIET! . . . Matching wheel cone accurately fits venturi inlet for quieter, smoother air movement. Ideal for hospitals, churches, auditoriums and schools.

STURDY! . . . All welded construction. Material 16 ga. or over. Built for life of building.

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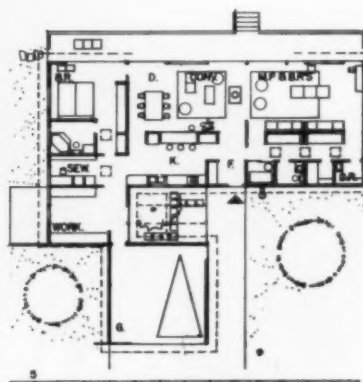
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See Our Catalog In Sweets

First prize winner in Indianapolis Home Show design competition was entry of David G. Billmeyer, in association with fellow Notre Dame student Noel J. Blank. Jury commented that "arrangement of space was the outstanding thing about this design"



NOTRE DAME STUDENTS FIRST IN HOME SHOW COMPETITION

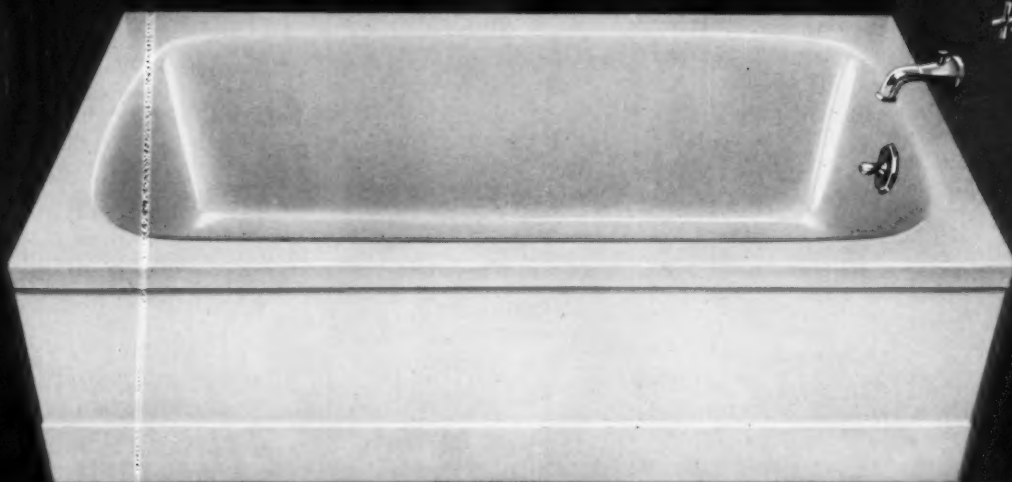
Examining more than 225 entries from architects, designers, draftsmen and students, judges of the annual architecture design competition of the Indianapolis Home Show awarded the \$1000 first prize to Notre Dame architecture student David G. Billmeyer, and his collaborator, also of Notre Dame, Noel J. Blank. The \$500 second prize went to Howard E. McCall, and the \$200 third prize to Thomas S. Torke (their designs, p. 346). Honorable mentions, each of \$50, were awarded to Gerald H. Miller; Home F. Woodward; Frederick F. Sadri; Pvt. Richard C. Donkervoet; Roger W. Kautola; and Robert Vignieres, Jack Saro and David Miller.

The program called for a house for a retired couple, with ample room for hobbies and guests. Speaking for the jury, chairman Leon Chatelain Jr., president of the American Institute of

(Continued on page 348)

ANNOUNCING!

*The ideal tub for
budget-spaced, budget-priced homes*



The FREMONT

by **BRIGGS BEAUTYWARE**

6 inches shorter outside—full size inside

Now! Briggs answers the increasing demand for a bathtub that fits the special requirements of limited space and budget. The new Fremont recess model with right (B-100) or left (B-101) outlets fits in just $4\frac{1}{2}$ feet, yet the interior is *full sized*. Manufactured to Briggs quality specifications, yet tagged with a truly competitive price! In Briggs' 5 decorator colors and white.

SPECIFICATIONS • Only $4\frac{1}{2}'$ long, but full height ($16\frac{1}{4}''$) • Free-standing steel construction • Stain-proof (acid-resisting) porcelain • Leakproof wall flange • Straight front, non-slope back give full-size bottom surface with only $4\frac{1}{2}'$ in outside dimension.

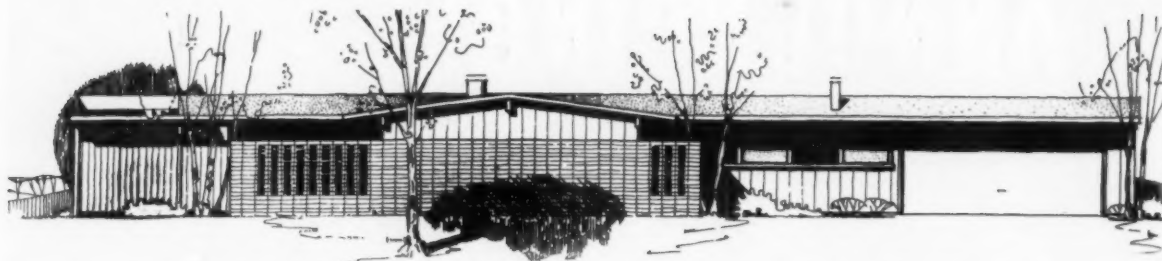
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THE RECORD REPORTS

(Continued from page 344)



Complete Specifications for Lasting Floor Beauty



IN SWEET'S

See 8-page Multi-Clean insert at end of Section 13 of Sweet's Architectural File. Also advertised in Producers Council Technical Bulletin.

Want to be sure your clients' floors keep their "new floor" beauty year after year?

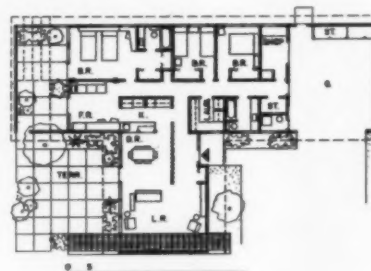
Then use these complete, modern specifications for initial treatment and future maintenance, prepared by America's largest manufacturer of a complete line of floor maintenance materials and equipment.

Based on the scientific MULTI-CLEAN METHOD of floor care, these handy tear-out-and-use specs include the right materials, right equipment, and right technique. Separate tabbed sections for asphalt, rubber, and vinyl tile; concrete; gymnasiums; terrazzo, oxychloride and wood floors.

For your copy and name of local MULTI-CLEAN METHOD consultant, write Architect Service Department 42-77, Multi-Clean Products, Inc., St. Paul 16, Minnesota.



Second prize in the competition was awarded to Howard E. McCall, research associate in architecture at Small Homes Council at the University of Illinois



Architects, remarked, "All the entries were modern in the sense of crisp clean lines and effective use of space. There was no useless ornamentation even in those that showed a touch of the traditional."

Serving with Mr. Chatelain on the jury were Raymond Thompson, president of the Indianapolis Section of the Indiana Society of Architects; Howard L. White, A.I.A.; O. C. Winters, and Ben Olsen Jr., builders. Richard C. Lennox, A.I.A., was architectural advisor.

Third place was taken by Thomas S. Torke, an architectural student at the University of Illinois



(More news on page 348)



THE TOWN AND COUNTRY PLAZA SHOPPING CENTER, Pensacola, Fla., used 1,825 tons of structural steel, including 448 tons of AmBridge Steel Joists
—all fabricated and erected by American Bridge.

AMBRIDGE STEEL JOISTS

save time and money at Pensacola Shopping Center

THE TOWN AND COUNTRY PLAZA SHOPPING CENTER, Pensacola, Florida, is a fine example of the way AmBridge Steel Joists can work for both architect and builder. Available in two types—Standard and Long Span—AmBridge Steel Joists are so versatile they can be used to support any type of modern roof, ceiling, or floor . . . giving architects unusual latitude in design. Here, in the Plaza, they hold aloft cantilever balconies and canopies with rigid safety, add eye-appeal to the finished buildings, and protect shoppers from Florida sun and rain.

Builders know that time saved is money saved. Strong, light, easy-to-handle AmBridge Steel Joists are installed quickly, cut the time required to put your building under cover. When used for floor construction they allow other inside trades to begin work sooner. To simplify your outfitting tasks, the modern underslung, open-web design of

AmBridge Steel Joists permits unobstructed passage of pipes, ducts and conduits in any direction, affords maximum head room for ceilings.

And AmBridge Steel Joists are modern right down to the way they are fabricated and resistance welded. Production line output gives you better, more uniform stock, in quicker time for delivery. AmBridge Steel Joists can help you save time and cut costs on your next project. Get in touch with our nearest contracting office . . . NOW . . . for detailed information.

Shopping Center Developer: B. THORPE & CO., PITTSBURGH, PA.

General Contractor: BAKEWELL CONSTRUCTION CO., PITTSBURGH, PA.

Architects: BRANDON SMITH, PITTSBURGH, PA.,
F. T. EDSON, PENSACOLA, FLA.

Designing Engineer: J. W. LAUFFER, PITTSBURGH, PA.

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AMBRIDGE STEEL JOISTS



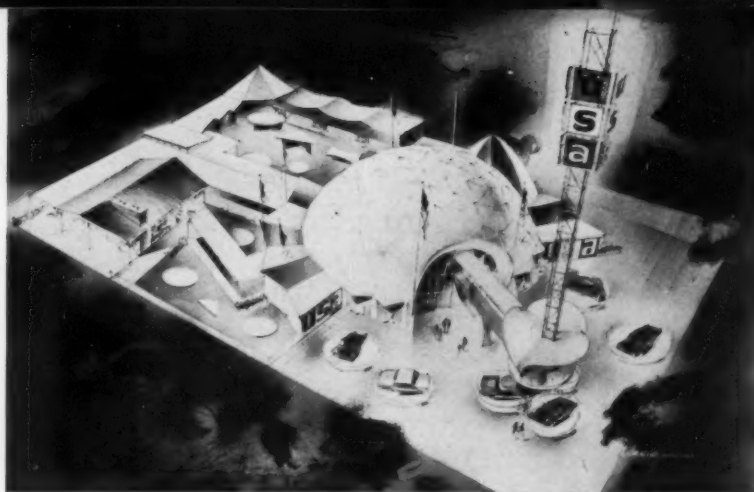
UNITED STATES STEEL

THE RECORD REPORTS

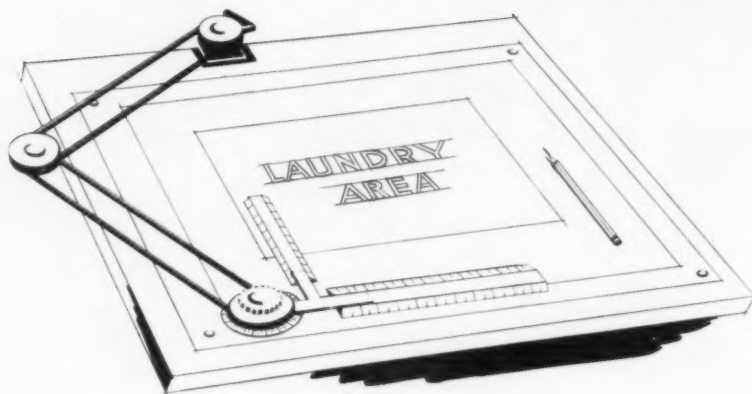
(Continued from page 346)

BEHIND THE IRON CURTAIN: U. S. DOME AT POLISH FAIR

Assigned the problem of designing a pavilion to display such varied items of American living as automobiles, a house, fashion and building materials, New York architect Reino Aarnio has planned the U. S. exhibit pavilion for the Poznan International Trade Fair around one of Bucky Fuller's geodesic domes. The



American pavilion at the Poznan Trade Fair showed new building materials in use in the aluminum and plastic geodesic dome as well as in exhibits



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dome, which has a diameter of 124 ft, will be fabricated of plastic and aluminum in this country, shipped and erected on the fair grounds; prefabrication was also used for the full-scale model house.

General exhibits in the dome are displayed on a steel-frame balcony, running around the entire circumference of the dome, as well as on the ground floor; in the center of the dome, at ground level, the architect has planned a garden and fountain. Extra exhibition space has been gained by the addition of a single-story building surrounding the dome, and giving an overall diameter of 164 ft.

At the center of the open plaza in front of the dome, an identifying tower was built of scaffolding. The platform at the bottom of the tower will be used for fashion shows and "periodic entertainment," as will the flying bridge, which is connected by a ramp to the balcony inside the dome, extends over the garden and outside to the platform. Both bridge and platform are covered with canvas.

Visitors to the display will leave the dome twice — once to see the house (a post and beam construction with brick veneer exterior) and once to enter a smaller dome containing exhibits on research.

Automobiles will be displayed on turntables in the entrance plaza.

The Polish fair, was held June 9 to 23, marks the first time that the United States has participated in a trade fair behind the Iron Curtain. The government's trade fair program, initiated by the President in 1954 and approved last year by Congress, is carried on under the direction of the Department of Commerce.

(More news on page 350)



Personalized year-round comfort... better—at lower annual cost

You get *all* of the inherent benefits of a fan-coil unit air conditioning system with Modine AIRditioners. Compare them on these *five major economy considerations*—and you'll see why beautifully-styled AIRditioners are first choice for both new building and remodeling.

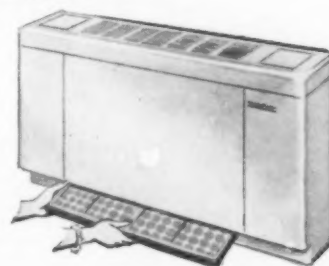
1. Quieter operation. Resiliently suspended Modine fans operate at 1050 rpm top speed. The result—maximum quietness.



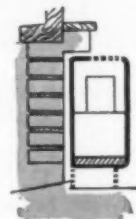
2. Lower maintenance costs. AIRditioners have permanently-lubricated motors that never need oiling.

3. Faster installation. AIRditioners are furnished with reversible coils, provision for right- or left-hand piping and wiring, generously sized end sections that do not cramp the installer.

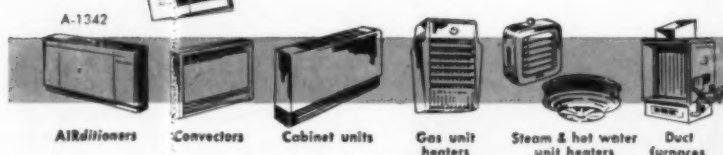
4. Easier filter changing. With AIRditioners you merely tilt the filter rack and *slide* out the filter. No need to loosen or remove the front panel.



5. Easier recessing. Square corners simplify recessing—up to 5 inches, with less than 6 inches protruding into the room.



You can choose from console, concealed, overhead or ceiling types in all popular sizes. For facts, see the Modine representative listed in your classified phone book, or write for Bulletin 755 to Modine Mfg. Co., 1510 DeKoven Ave., Racine, Wis.



A-1342

AIRditioners

Convectors

Cabinet units

Gas unit heaters

Steam & hot water unit heaters

Duct furnaces

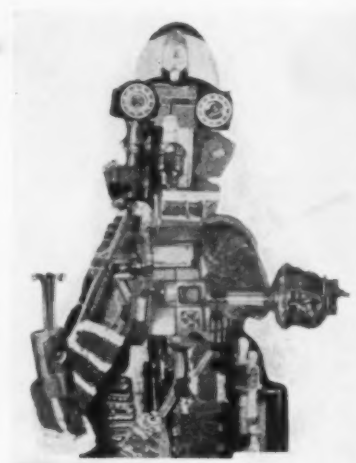
In Canada: Sarco, Ltd., Toronto

Modine
MANUFACTURING COMPANY

ARCHITECTURAL REVIEW, May 1957 (Great Britain), a special number on "Machine Made America," paints a different picture altogether from that of the well-remembered December 1950 issue of the *Review* on "Man Made America." When the reader has overcome the initial embarrassment of the implication that our machines really do this sort of thing better than we, the report, edited by Ian McCallum, gives a

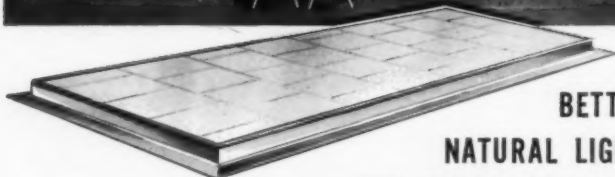
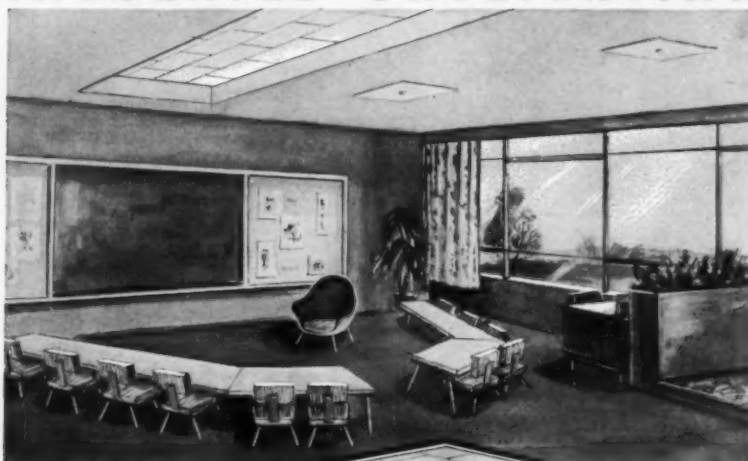
quite favorable, though not head-turning, view of American accomplishments and contributions. The two most considerable contributions, according to the *Review's* lights, are sheer quantity of building and the industrialization of the curtain wall.

"Syntax," the first of three main sections, is devoted to a study of the curtain wall, its past and present, and its implications for the future, leading,



The Review's "cover personage"; a collage of automotive elements, pre-mixed foods, ticker tape and parkways; source of the anatomical parts was "one of America's favorite flattering mirrors, colored magazine illustrations"

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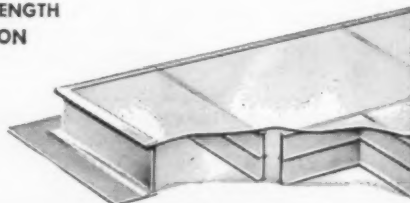


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suggests the *Review*, to a new architectural vernacular. "An age or a nation," it commented, "may or may not produce its geniuses, there is nothing at all you can do about it, but if the average man is left without terms of reference, codes of practice, vocabulary or pattern book, he flounders. And the average man, architect, builder, handyman and client has been left to flounder now for nearly 150 years without any clear architectural terms of reference. . . . The curtain wall is the first sign of such a discipline presenting itself to modern architecture and being generally accepted."

In "Genetrix," the magazine gives brief architectural biographies of 40 architects who have made "personal contributions to American architecture."

"Matrix" is an assessment of "American architecture in world perspective," and takes, for a European observer, a refreshingly lenient view of U. S. fascination with the machine: "America does not suffer from . . . inhibitions; it has kept its very real feelings of guilt well-reined in the matter. . . . Of course America is not free from fear of the possible consequences, (a little fear in this department can be a life-saver), nor is it free of laggardness in adapting itself (cf. architectural education and the landscape), but the willingness is there and the right kind of brashness is there."

(Continued on page 352)



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THE RECORD REPORTS CURRENT PERIODICALS

(Continued from page 350)

L'ARCHITECTURE D'AUJOURD'HUI, February 1957 (France), carries a report on developments in French West Africa and French Equatorial Africa, where building has flourished since the end of World War II. Much of this post-war building has been for industry, still another large part of it city planning. In 1946, plans were laid for major de-



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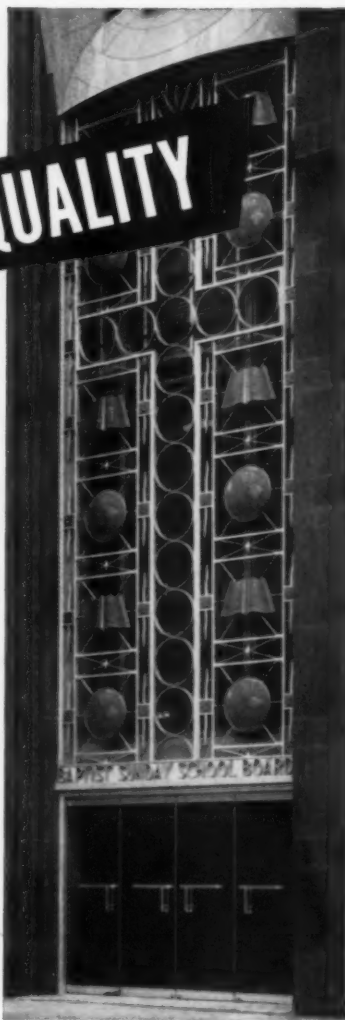
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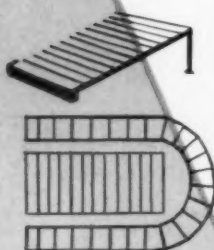
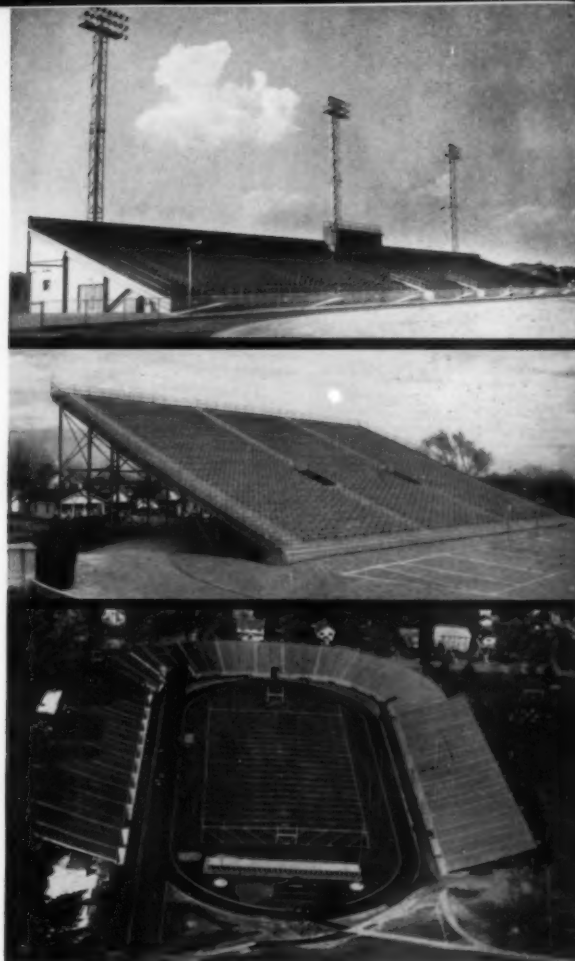


velopment of six cities — Dakar, Douala, Brazzaville, Conakry, Fort-Lamy and Adbijan. Two articles — one by Roland Pré, the other by Michel Weill — agree that technical gains have been made in designing for the climate, but agree also that design is "too European."

Among the buildings shown in the report: (1) Palais du Grand Conseil for French West Africa, Dakar — Daniel Badani and Pierre Roux-Dorlut, architects; (2) City Hall, Abidjan — Henri Chomette, architect; (3) office, Crédit Congolais, Leopoldville — Claude Laurens, architect.

(Continued on page 351)

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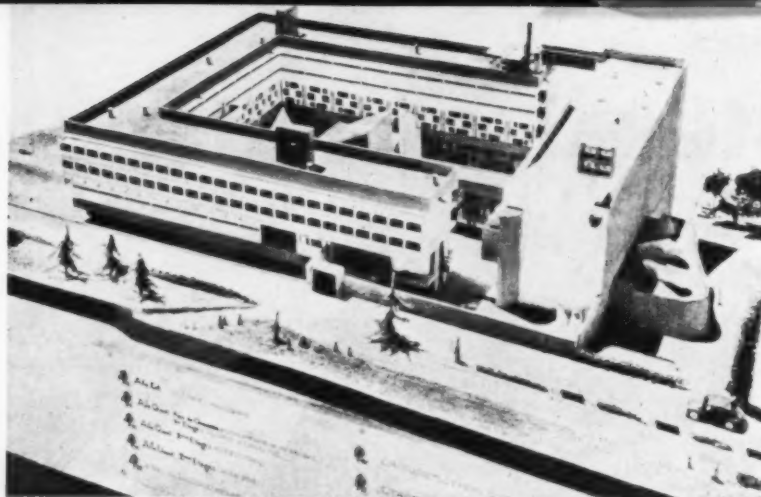
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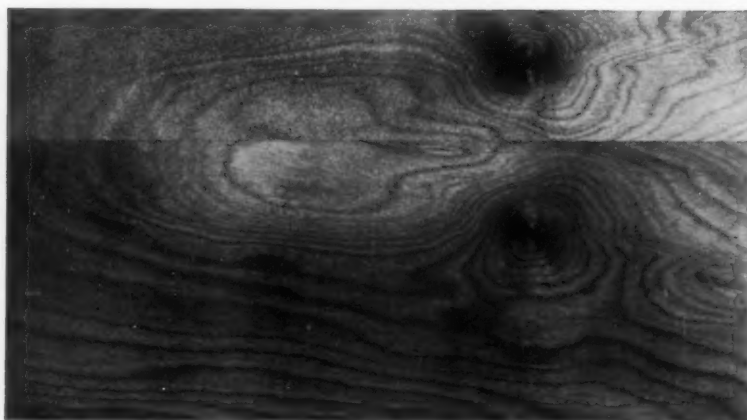
THE RECORD REPORTS CURRENT PERIODICALS

(Continued from page 352)

ARKITEKTUR, February 1957 (Denmark), is the first issue of the new journal of the Danish Architects' Federation, which decided recently to carry on its organization's business in one journal, and to produce this bi-monthly design magazine for both domestic and foreign consumption. It contains an English summary, with captions in both



BOUW, April 13, 1957 (the Netherlands), showed photographs of Le Corbusier's model for a Dominican cloister to be built at d'Eveux



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ARCHITEKTONIKE, March-April 1957 (Greece) is not a new magazine, though this is the first we have seen of it. It covers contemporary Greek architecture as well as some archeological findings and reports on foreign architecture, and carries translations in French, German and English, though not simultaneously for each article — most of the translations are in French. It is published at 3 Rue Kriesotou, Athens.

DESIGN, January 1957 (India), is, according to its subtitle, a "Review of Architecture, Applied and Free Arts." This first issue contains two text pieces on architecture, a report on town planning, and some material on Indian Art and textiles, as well as some lively criticism of the current state of Indian architecture. In English. Published monthly at Ionic, Colaba, Bombay 5.

NEUE LÄDEN, October 1956 (Germany), is the second number of a journal devoted entirely, as its name suggests, to the design of stores. Captions all are in German, French and English, and an English supplement is provided. Published bi-monthly by Konradin-Verlag, Postfach 625, Stuttgart.

SINKENTIKU, December 1956 (Japan) is an established magazine now publishing an English edition. The English and the photography are generally excellent; a small glossary of Japanese measurements and architectural terms is provided in each issue. Published monthly at 6, 1-Chome, Takaracho, Chuo-ku, Tokyo.

(More news on page 356)



The new Y.M.C.A. in Stroudsburg, Pa., was designed by Rinker and Kiefer, architects. General contractor: Paul L. Edinger. Both are Stroudsburg firms.

STEEL JOISTS HELP PROVIDE FIRE-SAFETY FOR Y.M.C.A. BUILDING IN PENNSYLVANIA

The attractive Y.M.C.A. building in Stroudsburg, Pa., is a three-story brick structure containing lobby, club rooms, dormitory rooms, craft shop, kitchen, gymnasium and swimming pool.

Bethlehem Shortspan Steel Joists were used in the floor structures throughout the building. These steel joists were chosen not only because they provide a rigid, non-warping construction which keeps future maintenance at a minimum, but also because they provide a fire-resistant construction. In combination with floor slab and ceiling, steel joists provide up to four hours' fire-safety.

Bethlehem Open-Web Steel Joists offered several other advantages to the builders of the Y.M.C.A. They reached the job-site fully fabricated, tagged and ready for placing. They needed only field-welding to secure them permanently in place.

In the roof structure over the swimming pool, the builders used Bethlehem Longspan Steel Joists, giving to the swimming pool maximum unobstructed space, with no need for vertical supports. Longspans also simplified the installation of the lighting over the pool, because wires and conduits as well as piping could be run right through the open-webs.



Bethlehem Longspan Joists in the roof over the swimming pool give maximum column-free space below.

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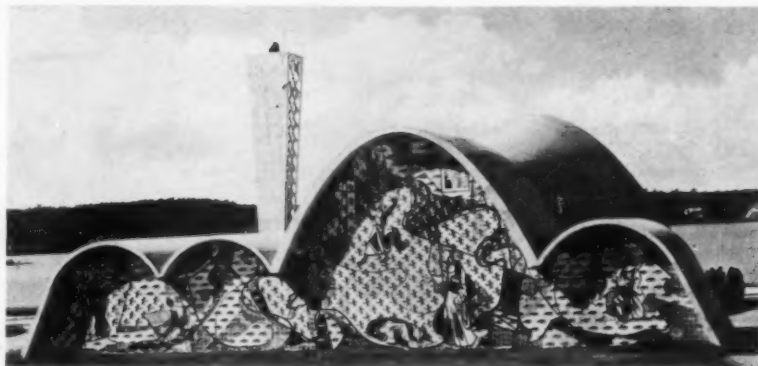


THE RECORD REPORTS

(Continued from page 16)

in a special section covering this country, while both Europe and South America are represented in the larger section. Among the architects whose work is shown: Baudot, Auguste Perret, Guillaume Gillet, Domenikus Böhm, Erik Bryggman, Oscar Niemeyer, Felix Candela, Le Corbusier, Giuseppe Vaccaro, Rudolf Schwarz, Mr. Wright, Lloyd Wright, Pietro Belluschi, Philip C. John-

(Continued on page 358)



Above: Church of St. Francis, Pampulha, Minas Gerais, Brazil, 1943; Oscar Niemeyer, architect— "a response on Niemeyer's part to the more emotional aspects of worship in the Latin temperament"

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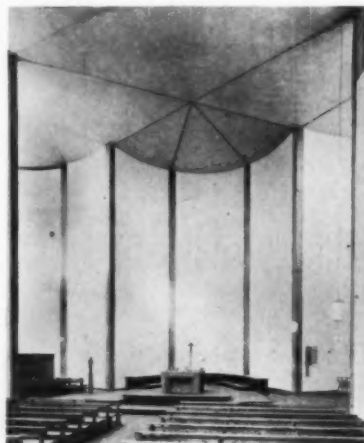
The Halsey W. Taylor Co., Warren, O.

P-73

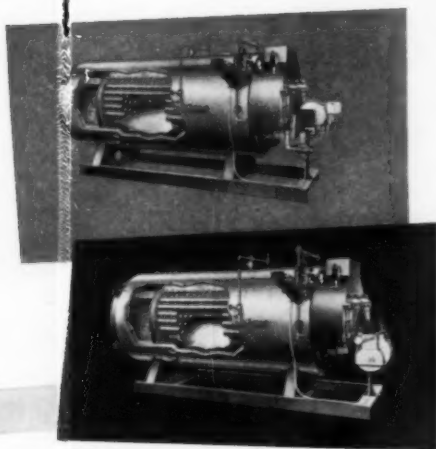
COOLER FOUNTAINS



Above: Church of Notre Dame du Haut, Ronchamp, France, 1955; Le Corbusier, architect — "the result of plastic and abstract curves molded and formed with consummate artistic power." Below: Church of St. Michael, Frankfurt am Main, Germany, 1955; Rudolf Schwarz, architect — "... a fortress from the exterior ... the interior is airy and uplifting, the scene of great architectural refinement"



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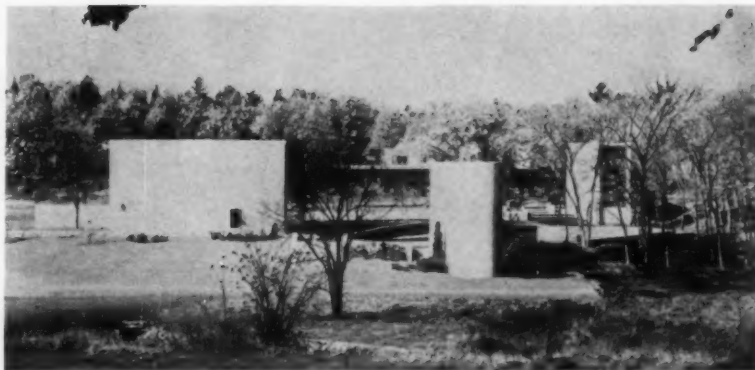
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THE RECORD REPORTS

(Continued from page 356)

son, Ludwig Mies van der Rohe, Harrison & Abramovitz, and Eero Saarinen.

The exhibit is scheduled to be seen at the Washington Cathedral, Western Michigan College, Williams College, Philips Exeter Academy and in 1958, at Washington University, the University of Michigan, the University of Illinois, Carleton College and the J. B. Speed Art Museum in Louisville.



Above: Interfaith Center, Brandeis University, 1955; Harrison and Abramovitz, architects — "chapels for divergent faiths are essential elements in a harmonious relationship — an achievement of more than passing religious significance"



Above: Meeting House of the First Unitarian Society, Madison, Wis., 1951; Frank Lloyd Wright, architect — "characterized by a richness that only Wright can impart." Below: Wayfarer's Chapel, Palos Verdes, Cal., 1951; Lloyd Wright, architect — "conceived with a high order of understanding (of Swedenborg theology) and executed with great delicacy"



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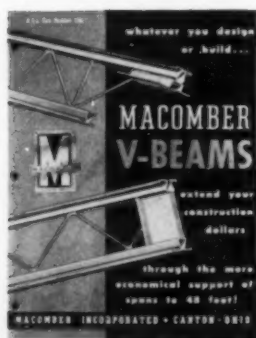
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THE RECORD REPORTS

WASHINGTON REPORT

(Continued from page 32)

ing easy access to living, bedrooms, and utility areas without crossing other rooms. The prototype designs are intended to give as broad an application as possible with many basic arrangements. Minimum size is shown on the definitive drawings in order to guide base commands and architect-engineers in arriving at a standard acceptable

design solution; however, lesser areas might be acceptable, as useable floor area varies with the shape of a room, location of doors and windows, accommodation of furniture and equipment, activities, circulation and storage.

"Housing design in terms of specific room sizes or areas is not wholly satisfactory; the true meaning of adequacy is the possibility for smooth functioning of family life."

The Air Force criteria for design of family housing has been deliberately kept as broad and comprehensive as

possible to allow architect-engineers latitude and freedom in design, Mr. Julius said. This permits easier adaption to particular base locations.

"By this means," he continued, "it is believed that the Air Force has been able to obtain housing that breaks away from preconceived design trends, producing larger houses, with better materials and construction, still in keeping and in consonance with local practices and military aims."

The Air Force feels that Congress has recognized the importance of family housing facilities in all branches of the armed services by its previous enactment of legislation covering this program. The Armed Services housing built under Title VIII is government owned. It is built under a mortgage process (not with direct appropriations) on government owned property leased by the military departments to a mortgagor-builder corporation. The contractor or eligible builder is selected through competitive bidding, based on plans and specifications prepared by architect-engineers directly for the military departments.

The eligible builder constructs the project using private mortgage financing, insured by the Federal Housing Administration. Repayment is guaranteed by the military departments.

When the housing is completed, the corporation is owned 100 per cent by the military departments and the housing units will be maintained and operated as public quarters with mortgage payments being made from available funds appropriated annually for the quarters allowance. The military departments make each monthly payment on mortgages directly to the mortgagees.

Mortgageable maximum average cost per family unit cannot exceed \$16,500, although the average Air Force unit cost to date is \$15,000. This includes cost of financing, utilities, roads, sidewalks, equipment, design, inspection of the construction and overhead as well as ranges, refrigerators, shades, screens and fixtures.

The law permits the services to finance off-site developments such as utilities, road extensions and land acquisition, from available appropriated funds. Maximum net floor areas are established as follows:

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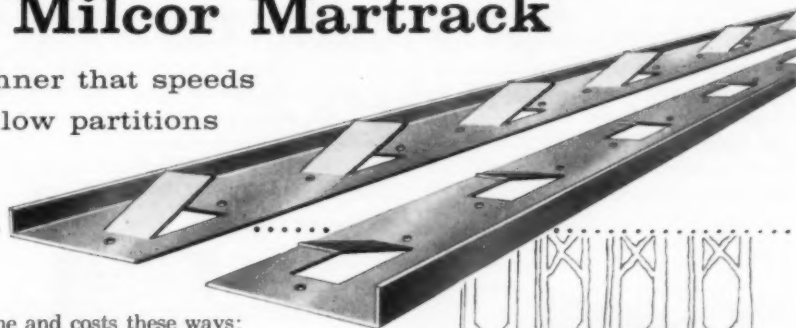
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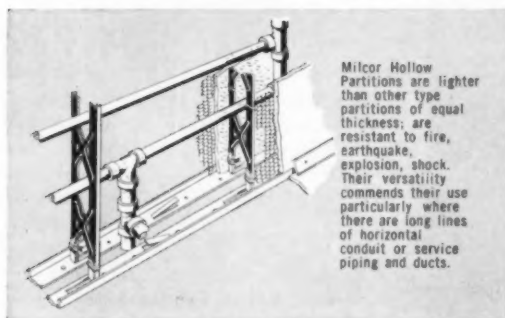
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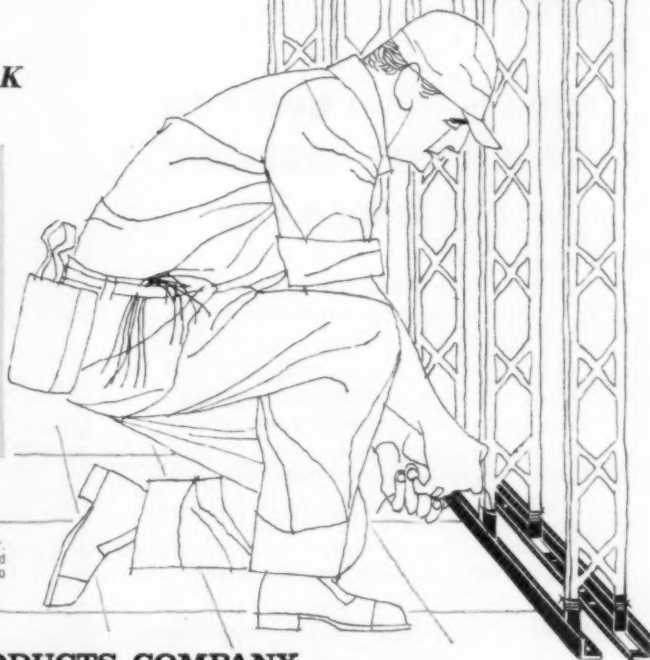
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ML-7

THE RECORD REPORTS WASHINGTON TOPICS

(Continued from page 48)

school construction assistance bill of 1957, finally cleared the House Education and Labor Committee and headed toward rough and tumble debate on the House floor. Only one obstacle stood in its path on the House side of Capitol Hill before floor consideration — approval by the Rules Committee. Education Committee chairman Graham A.

Barden (D-N. C.) had asked for Rules consideration, but early in June no hearings had been scheduled.

The American Institute of Architects objected strongly to certain phases of the measure dealing with standards and construction by state school financing agencies. In a letter submitted through the U. S. Office of Education, A.I.A. protested that part of the proposed legislation which would give state agencies — not primarily construction agencies — authority to devise and apply construction standards. It felt the bill

was weak in its failure properly to define the word "standards" and other building terms. Long delays would result, it maintained, if state legislatures must vote new laws, as they would have to do in many cases.

The architects' major objection, however, was directed to that part of the bill dealing with establishment of standards and the construction of schools by state agencies. The A.I.A. letter to the U. S. Office of Education read in part:

"While we recognize need for standards to govern health, safety and educational efficiency of school facilities, we believe the first two factors should be covered by local building codes. The educational program is, of course, traditionally of local concern as well as under general state supervision. We believe the undefined word 'standards' opens up a wide avenue for exploitation of local needs by commercial stockplan ideas in spite of rather widespread dissatisfaction of those who have really tried them and realize their excessive long-trend cost.

"We deplore equally the implication of Sec. 309 . . . and Sec. 410 . . . taken together, as they must be, which invite state school financing agencies to perform all of the services listed in the definition rather than to provide funds for these services performed in the traditional and economical manner by private professionals and private enterprise."

The committee-approved bill is a straight compromise between the conservative proposals of President Eisenhower and the more liberal measures introduced by Democrats on the committee. It calls for authorization of expenditures amounting to \$1.5 billion in all over a five-year period starting July 1, 1957 to aid states with their classroom construction problems. An overall figure of \$2 billion was seriously discussed in the committee, but the lower figure was finally voted in the belief it would improve the chances for the legislation in this year when Congress is in a budget-cutting mood. In proposing the lower figure, Rep. Samuel K. McConnell, Jr. (R-Pa.), said he was convinced just as good a job would be accomplished with the \$300 million annually as with the \$400 million proposed in the subcommittee measure.

Sealing down the Federal funds proposed for allotment to the states, the committee left untouched the subcommittee-approved provision on method of distribution. This calls for half the money to be allotted on the basis of school age population and half on pre-

(Continued on page 364)

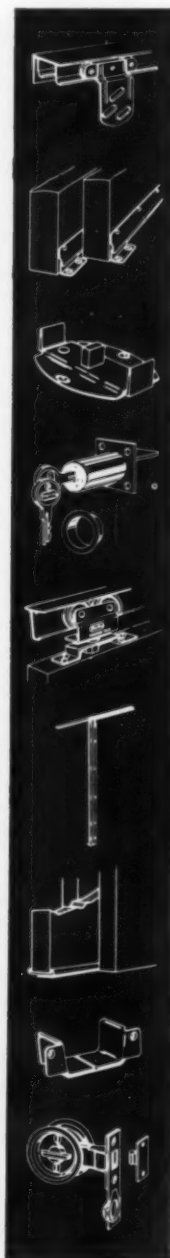


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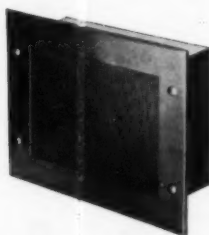
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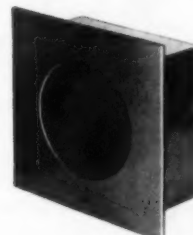
Deluxe Model CK7X. For combination recessed radio and master intercom. 18 gauge rust-proof box with 3/4" knock-outs on all sides. Plate available in either primed coated steel or stainless steel.



Model C5STX. Steel sub-station box and face plate with fine perforated steel mesh grille. Suitable for mounting either 5" or 6" speaker, all hardware furnished.



Model C5RX. Steel sub-station and grille with opening for 5" speaker, provision for mounting push-to-talk switch. Wall or ceiling mounting. All hardware furnished.



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THE RECORD REPORTS WASHINGTON TOPICS

(Continued from page 362)

determined need. Also unchanged was the section on Federal purchase of bonds issued by communities which can finance their own construction but are troubled with raising money on reasonable terms.

In its final report to the House, the committee noted its lengthy hearings, which extended from February 4 through

March 14. The published hearings are contained in three volumes totaling 1301 pages and include testimony or statements of nearly 400 individuals or groups.

There was this reference to classroom need:

"Conflicting testimony was presented regarding the extent of the classroom shortage. It was concluded that it is probably impossible to obtain an absolutely accurate figure as to the number of classrooms needed throughout the nation. However, a majority of the full

committee believes that the estimates made by the various state school agencies and issued by the United States Office of Education are as accurate as any that may be obtained. A majority of the committee believes that pockets of need exist in virtually every state."

Citing the U. S. Office of Education's school facilities summary, the committee said information indicated that at the beginning of the 1956-57 school year a total of 159,000 additional instruction rooms were needed. Estimates from the states also showed that 69,200 instruction rooms were scheduled for completion during the school year.

The committee majority drew this conclusion:

"The effort on the part of state and local school agencies, as reflected by the statistics, indicates there has been no diminution in effort as compared to the past, but that it falls short of meeting the requirements resulting from excess enrollment for the 1956-57 school year and the replacement of inadequate or obsolete facilities."

Not all committee members shared these views, however. Six members signed a minority report which claimed the bill was unfair and discriminatory in its manner of allotting money to the states. Strong statements in the minority views indicated a brisk fight on the House floor. The bill was certain to run into trouble on the segregation issue, too, as it did last year. Known as H. R. 1, its chances for final enactment at this first session of the 85th Congress were not too bright last month.

AS SENT INTO CONFERENCE, HOUSING BILLS EASE CREDIT

After months of hearings and floor debate, the new omnibus housing bill for 1957 reached finally a conference of both houses of Congress. In its final form it was barely recognizable when compared with the Administration's initial proposals.

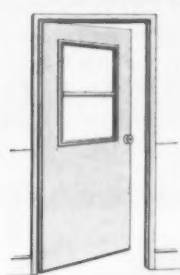
Despite charges of "creating new inflationary pressures" which came from many sources, the two bills—House and Senate—as they went to conference committee, called for lower down payment requirements on Federal Housing Administration homes. The House measure lowered the down payments on FHA-insured homes from five to three per cent on the first \$9000, calling for 15 per cent down on the next additional \$6000 and 30 per cent down on the remainder up to \$25,000. Under the old law, 25 per cent was required on all over \$9000.

(Continued on page 366)

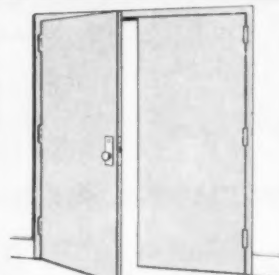
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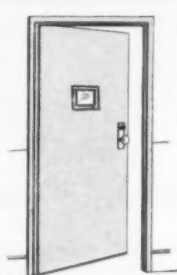
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used to
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flooring...



Flexachrome now cuts down maintenance



No more waxing. When used as replacement for worn, dingy non-durable flooring in the children's dining room, Flexachrome proved it would remain bright and cheerful without need of expensive waxing. *"Just washing and buffing."*

Newington Home and Hospital for Crippled Children also demonstrates Flexachrome's tough, non-skid properties

"The daily maintenance required is a costly one," wrote Mr. E. B. Foss, Director of this Newington, Conn., institution. That was four years ago. His words referred to flooring that tough, safe Flexachrome is now replacing throughout the hospital.

In the corridors, as in many other places, vinyl-asbestos Flexachrome proved its ability to withstand the most punishing wear. And earned the right to be chosen as standard material for all floor-tile replacements.

As Mr. Foss writes—from experience—"Flexachrome will cut floor maintenance costs considerably."

If your floors are being worn out, destroyed; if slipping is a hazard; if sanitation is a must; if long-lasting bright cheerful good looks are desirable, it's worth while to obtain detailed facts about Flexachrome and other useful products in the Tile-Tex line.

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THE RECORD REPORTS

WASHINGTON TOPICS

(Continued from page 364)

The Senate's version, passed following House approval, stipulated a three per cent down payment requirement on the first \$10,000, 10 per cent on the next \$6000 and 30 per cent on the remainder up to \$20,000.

According to Senator John J. Sparkman's diagnosis of the two pieces of legislation, the House bill provided

greater support for government purchase of insured mortgages, while the Senate version would encourage a more workable housing program, providing more help to enable low and middle income and elderly persons to get better housing.

The Senate passed its bill 69 to 1 after three days of debate. The House already had approved the measure authored by Rep. Ed Edmondson (D-Okla.), on a voice vote following two days of consideration.

The House voted a larger sum for

secondary market operations of the Federal National Mortgage Association (FNMA) than did the Senate.

The more liberal Senate bill contained authorizations approximately \$450 million greater than President Eisenhower had requested. Many of these were loan items which would be repaid, Senator Sparkman pointed out.

Public housing took a stinging defeat at the hands of the House members who approved an amendment by Rep. O. Clark Fisher (D-Tex.), which aimed at limiting occupancy in low-rent public housing units to those families requiring it because of being displaced by Federal, state or local government action in a community. This made public housing an issue in the conference committee consideration of the two bills.

In industry reaction, the National Association of Home Builders gave its approval to the legislation before the conference group. A large share of the responsibility for success of the final bill was placed squarely before the lenders by the home builders.

N.A.H.B.'s president, George S. Goodyear of Charlotte, N. C., phrased it this way: "Just how effective this legislation will be depends in large measure on the responsibility of the lending industry. It will depend on the willingness of mortgage lenders to provide adequate credit to these families who have not had the down payment but can afford to purchase a home."

The home builders were insistent that any legislation passed this year could not affect building programs until sometime in 1958. Said Mr. Goodyear: "The season is too far advanced for the signed bill to have any effect on the industry this year. It takes many months for a builder to acquire the necessary land and financing to begin construction work."

NEW HILL-BURTON PROJECTS MULTIPLY "PROBLEM AREAS"

The "problem areas" inherent in the Hill-Burton program have been multiplied by the addition of the non-hospital facilities, the Senate appropriations subcommittee was told by Dr. Vane M. Hoge, chief of the division of hospital and medical facilities, Public Health Service.

In a statement supporting the Administration's request for \$1.4 million for programming, design and construction supervision under Hill-Burton, he pointed out that many mandatory functions must be performed which are not de-

(Continued on page 368)



How to make tropical birds feel at home in Minnesota!

A chilling challenge? Yes, but to the craftsmen down at Crown Iron Works, the answer was simple after they boned up on birds preparatory to building a happy home for 65 tropical featherlings in Minneapolis' fabulous Southdale shopping center.

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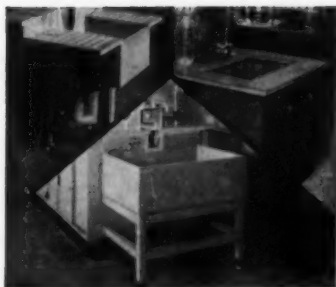
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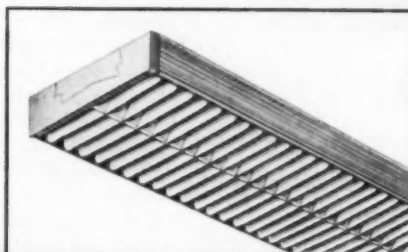
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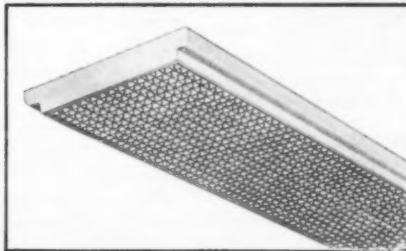


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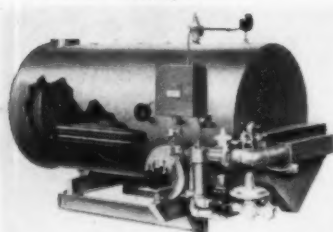
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THE RECORD REPORTS WASHINGTON TOPICS

(Continued from page 366)

pendent upon the volume of construction projects. These activities include the review and approval of annual revisions and supplements to state plans, development of technical and professional standards, minimum standards of construction, and general information about the program as requested by states and local organizations.

"Time and staff must also be devoted to other requirements of the Act such as review and approval of construction programs and schedules of construction applications, architectural plans, specifications and contract documents, surveillance of bid and award procedures, and assurance of compliance with minimum wage rate determinations," he told Congress.

Since the program now includes a broad range of health facilities and resources, apart from the actual hospitals, the so-called problem areas have been multiplied by the "scope and complexity" of the division's functions, it was maintained. Congress was told that the USPHS must continue to furnish leadership and guidance to states and project sponsors and to coordinate activities into a comprehensive approach for planning the provision of a broad range of health services. That is why the \$1.4 million was represented as a "must" in the budget, Dr. Hoge said.

JETS EXPECTED TO PRODUCE TERMINAL DESIGN PROBLEMS

The advent of the jet age in aviation spells work and opportunity for the ingenious architect, according to James T. Pyle, administrator of Civil Aeronautics, Department of Commerce.

"Over a period of years, many airports must enlarge their terminal buildings," he remarked. "We are soon to have planes in service which will carry 100 to 150 passengers. When frequent schedules unload and load passengers in this volume, a different size of terminal will be needed, and one better designed for the efficient flow of that many passengers to and from the airplanes. Here is work and opportunity for ingenious architects."

The CAA administrator asserted that jet transports will not obsolete "all our airports" in a single day as some alarmists have threatened. But he said they would require serious planning and

(Continued on page 370)



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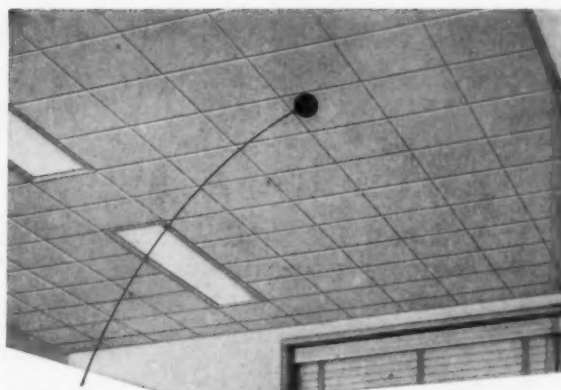
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**THE RECORD REPORTS
WASHINGTON TOPICS**

(Continued from page 368)

some changes at many airports. He looks for the principal areas of change to be in size and design of terminal buildings.

Administrator Pyle adds: "On the ramp the jet brings new problems, a chief one of which is fueling equipment and methods. A jet can ask for 20,000 gallons of fuel at a major air terminal of one of its long-range flights. The jet exhaust and the jet intake present us with new personnel safety problems at airports, and for these the CAA feels the same concern as for passengers in flight."

Meanwhile, the battle over concrete versus asphalt for airport runway and apron surfaces continued. The asphalt interests found a champion in Rep. Mahon (D-Tex.), who said he felt there had been "undue discrimination" against asphalt paving at airports.

**HEALTH RESEARCH SEEKING
\$116 MILLION IN BUILDINGS**

Federal assistance to the tune of \$116 million for constructing health research facilities is required now, according to a report made to Congress by the National Advisory Council on Health Research Facilities.

The Council, established by the law governing Federal aid for hospital and health facility construction, based its estimate on applications for grants received. The act presently authorizes \$30 million each year (fiscals 1958 and 1959) with the Congress having appropriated \$30 million for fiscal 1957 ending July 1.

The Council indicated in its statement that earlier this year there was evidence from 228 institutions throughout the country that there is a demand for at least \$116 million in Federal aid for this type of construction.

"This figure is expected to rise significantly because over 320 other institutions, which have not so far applied or indicated their intentions, have asked for application forms," the Council said. "The immediate and continuing response has been both enthusiastic and significant—in terms of interest, the nationwide geographic distribution of this interest, the variety of types of health science institutions interested, the kinds of needs disclosed, and the dimension of these needs."

(Continued on page 374)



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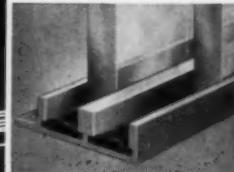
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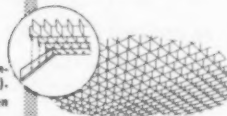
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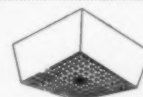
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ESTIMATING GENERAL CONSTRUCTION COSTS

by Louis Dallavia

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PREFACE

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3. REINFORCED CONCRETE WORK

Form fabrication • Form erection • Placing reinforcing steel • Placing concrete • Concrete finishing

4. STRUCTURAL STEEL WORK

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5. MASONRY WORK

Brick • Clay tile • Glazed tile • Concrete blocks • Stone veneer • Ledge stone • Flagstone • Terra cotta

6. CARPENTRY

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APPENDIX

Estimate form sheets for each type of operation

COMPLETE INDEX

The first estimating handbook ever published that cannot become out of date. Provides an accurate, foolproof method of estimating all direct production costs in earthmoving, concrete, masonry, steel, and timber construction. The tables on which the system is based have been developed and tested by the author during his 22 years experience as an estimator in building and heavy construction, and are unique in that they can be applied at any time or place with equal validity.

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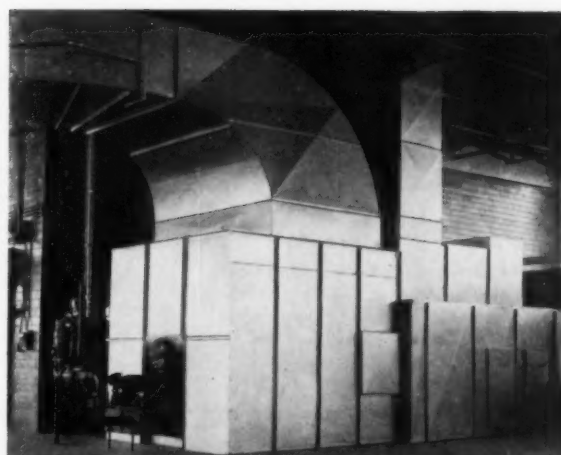
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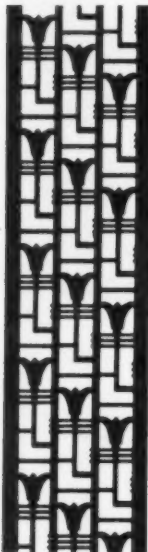
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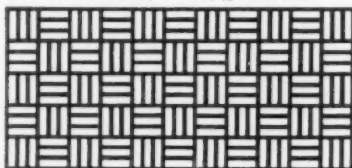
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THE RECORD REPORTS WASHINGTON TOPICS

(Continued from page 370)

GOOD DESIGN CALLED TOPS AS BUILDERS' SALES TOOL

Good design as a leading asset for the home builder was stressed at the recent conference on builders' buying habits conducted at and by the National Housing Center in Washington, D. C. More than 50 of the nation's leading residential contractors and representatives of 40 makers of principal products used in housing construction attended the second such conference held in the past six months.

Typical of comments on the design subject was this remark of Emil Gould, Miami, Fla., builder: "Gadgets will never overcome poor planning in home merchandising, but with both good planning and gadgets the builder has an unbeatable combination for selling his product. . . . The public is ready for a lot more than we give it credit for. We don't know nearly enough about what the public wants. Individual items don't sell houses in themselves; it is the sum total of the entire project."

Other builders present also urged their colleagues to recognize the importance of good design as a prime selling point.

NEW RULING ON MORTGAGES AIDS LOAN ASSOCIATIONS

National Savings and Loan League officials estimated that as much as \$250 million would be invested in participation loans this year as surplus mortgage funds shift from eastern areas to the money-starved west and southwest.

These investments now are legal under terms of new rulings made by the Federal Home Loan Bank Board. The 3700 member institutions are authorized by the action taken this spring to participate jointly in conventional mortgage lending anywhere in the country. The activity previously was limited to areas with a 50-mile radius of each lender.

The insured savings and loan associations now are permitted to invest up to 20 per cent of their assets in mortgage loans originated by insured institutions anywhere in the country. The participating association can acquire an interest in such mortgages up to 50 per cent of the value of the loan.

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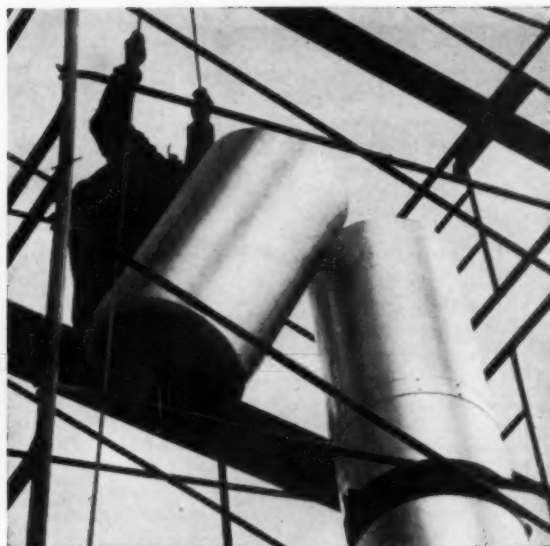
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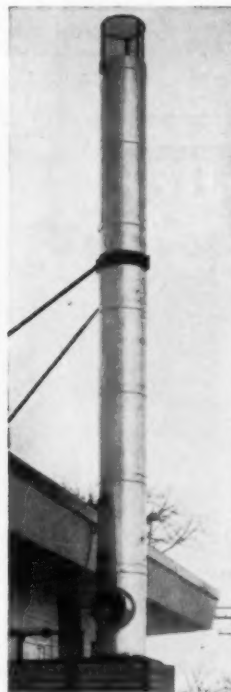
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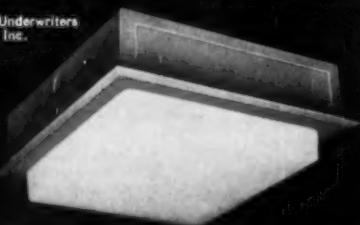


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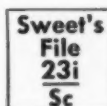
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REQUIRED READING

(Continued from page 62)

well past the century mark. Both the charm and the relative ruggedness of heavy adobe construction, plus a salubrious climate, seem to explain the survivals.

Mr. Lewis has written what is more a social history centered on architecture than a strictly architectural history. That is, true criticism and technical data are virtually absent, while light anecdotes abound. Nevertheless, as a collection of descriptions and good photographs of residences from adobe ranch houses to art-filled castles, the book is both interesting and valuable. The illustrations alone provide a remarkable exhibit of amazingly varied styles of domestic architecture.

P. C. F.

A SCORE FOR GINGERBREAD

The Gingerbread Age: A View of Victorian America. By John Maass. Rinehart & Co., Inc. (N. Y.), 1957. 212 pp, illus. \$7.95.

A book dedicated to clearing the name of Victorian architecture of years of calumny, and even to making it seem attractive and desirable, is an ambitious undertaking. Yet Mr. Maass just about carries off his self-imposed assignment. Actually, Victorian interior decoration, at least, has been enjoying something of a "comeback" in popular appreciation during the past few years. But this book is the first to emphasize the desirable attributes of the buildings put up in what critics have called the "Age of Horror."

The author goes beyond mere negative refutation of criticism. His attitude is one of positive appreciation; for instance, he is not afraid to use the word "beautiful" in describing structures embellished with scroll-work, spindle-work, towers, or cupolas. He retains some perspective, of course—he admits that one building combining Collegiate Gothic and a mansard roof is "now fortunately covered with ivy."

Mr. Maass, an art director with a Philadelphia advertising agency who also teaches at the Philadelphia Museum School of Art, portrays the American architectural scene from about 1840 to 1880—the period when the versatile men who designed buildings often doubled as surveyors, cabinetmakers, or illustrators. (The first graduate architect in America received his diploma in

(Continued on page 382)

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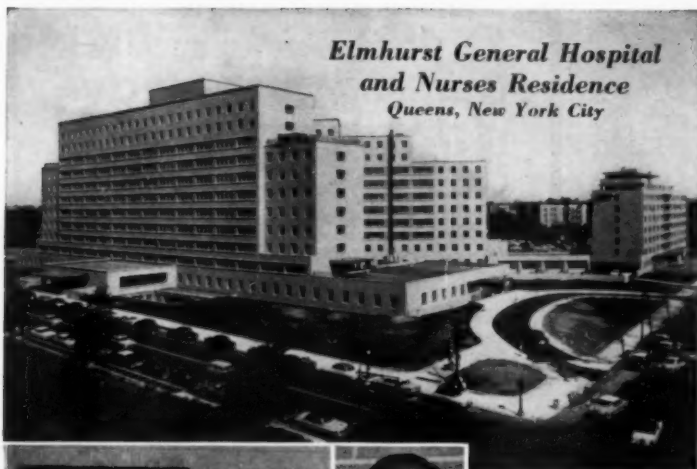
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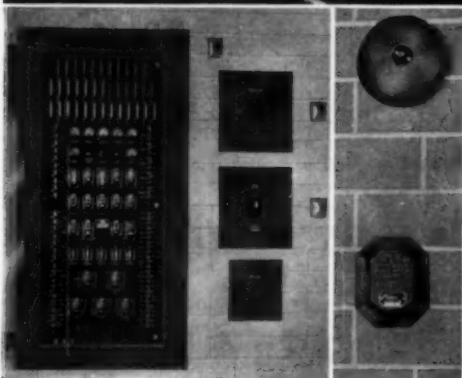
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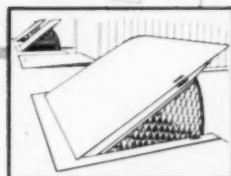
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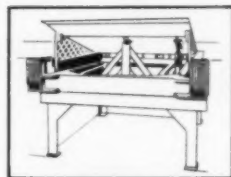
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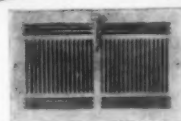


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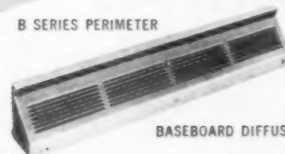


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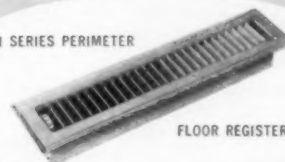
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REQUIRED READING

(Continued from page 378)

1873.) The many fine photographs and engravings present an almost bewildering variety of styles in both houses and public buildings, from Greek Revival to Carpenter Gothic to American Mansard. The author perhaps overstates his case for Victorian, but he does so with charm and facility, and whether one agrees or not, his book is thought-provoking, and his illustrations are fascinating.

EARLY GREEK DESIGN

Mnesicles: A Greek Architect at Work. By J. A. Bundgaard. Gyldendals Presseafdeling (Copenhagen, Denmark), 1957. 272 pp., illus.

This is a very complete and well-documented study of the work of Mnesicles, architect of the Propylaea of the Acropolis. The author, a Danish scholar, has produced what will obviously remain for a long time the indispensable treatment of the topic. The book includes a number of good photographs, many detailed drawings, and a key map of the site. The author evolves a reconstruction of Mnesicles' building on a somewhat new principle. He also concludes that Greek architects' greatest talents lay in the sphere of organization, rather than of creation.

STRUCTURAL DETAILS

Handbook of Standard Structural Details for Buildings. By Milo S. Ketchum. Prentice-Hall, Inc. (N. Y.), 1957. 120 pp., illus. \$4.65.

This handy reference book contains complete sets of scaled, detail drawings of six representative-type building structures, including a complete house, a masonry building, a reinforced concrete office building, a steel frame office building, an industrial building, and a timber building.

The book deals exclusively with the preparation of working drawings, and the principle emphasis is on the routine presentation of the minimum essential information for construction. Although, obviously, structural details will never become completely standardized, the drawings shown in this book have withstood the test of use in many architectural and engineering offices.

Students will find this book particularly helpful as a guide to preparing clean, concise, but adequately informative drawings of structural details.

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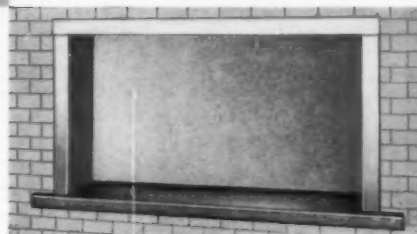
The New York City Board of Education has become the largest user of moving stairways in the school field. It has ordered 38 Peelle Motorstairs to be divided among the New York City schools as follows: Aviation Trades School, 12 Motorstairs; New York School of Printing, 12 Motorstairs; Fashion Institute of Technology, 14 Motorstairs.

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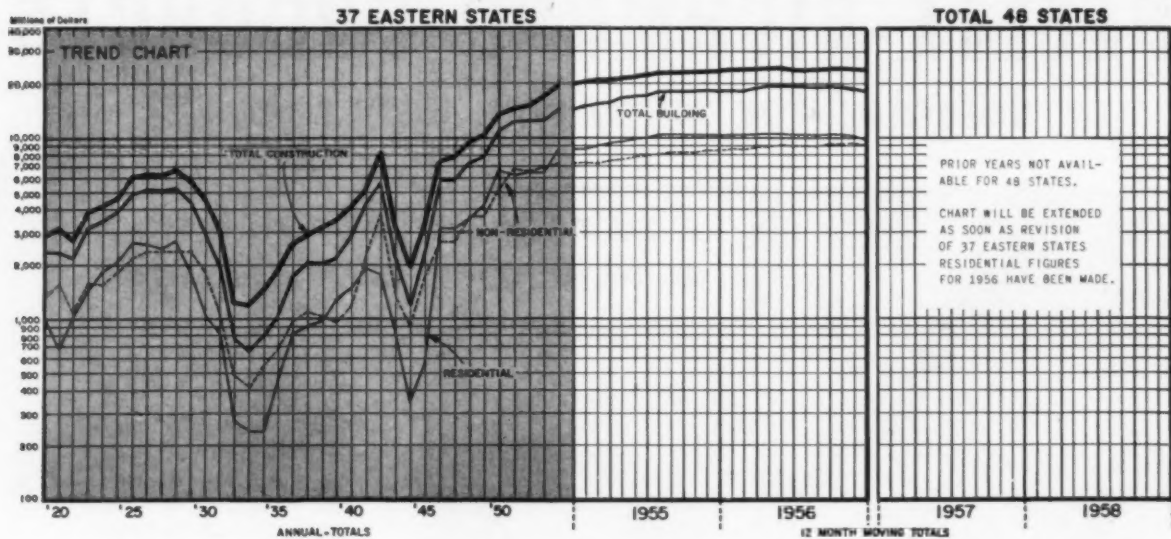
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SLIDE-UP

SLIDE-DOWN

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THE RECORD REPORTS: CURRENT TRENDS IN CONSTRUCTION

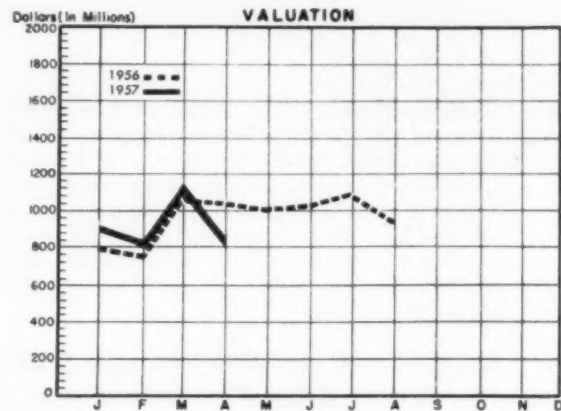


Charts by Dodge Statistical Research Service

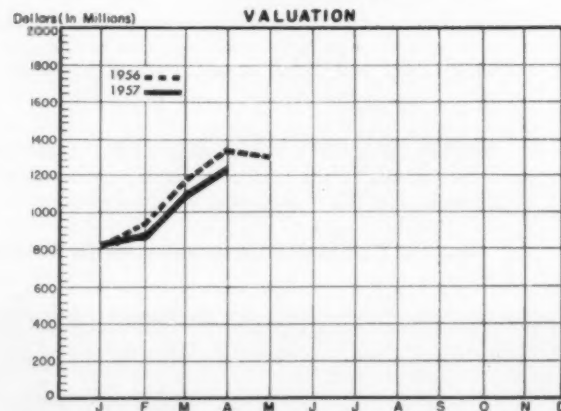
APRIL TOTALS DROP, BUT FIRST THIRD AT '56 LEVEL

April construction contracts, reports F. W. Dodge Corporation, fell nine per cent below the level established in April 1956. Thanks, however, to a rise in March contracts, the cumulative total for the first four months of the year stayed even with those of the same period last year. The sharpest drop in April occurred in the nonresidential category, down 20 per cent at \$838,065,000. The largest decreases in this category were recorded in manufacturing and public building. (For one exception, see table below on hospital construction.) In the first four months, nonresidential contracts were about on a par with the same period in 1956; the total was \$3,664,712,000. In residential building, April contracts, at \$1,231,667,000, declined eight per cent below the April 1956 dollar figure. Residential contracts in the first third of the year were valued at \$4,031,007,000, a six per cent decline. Heavy engineering contracts were up six per cent in April with a total valuation of \$706,699,000. For the first four months of the year, heavy engineering contracts, totaling \$2,619,272,000, were up 12 per cent.

NONRESIDENTIAL BUILDING



RESIDENTIAL BUILDING



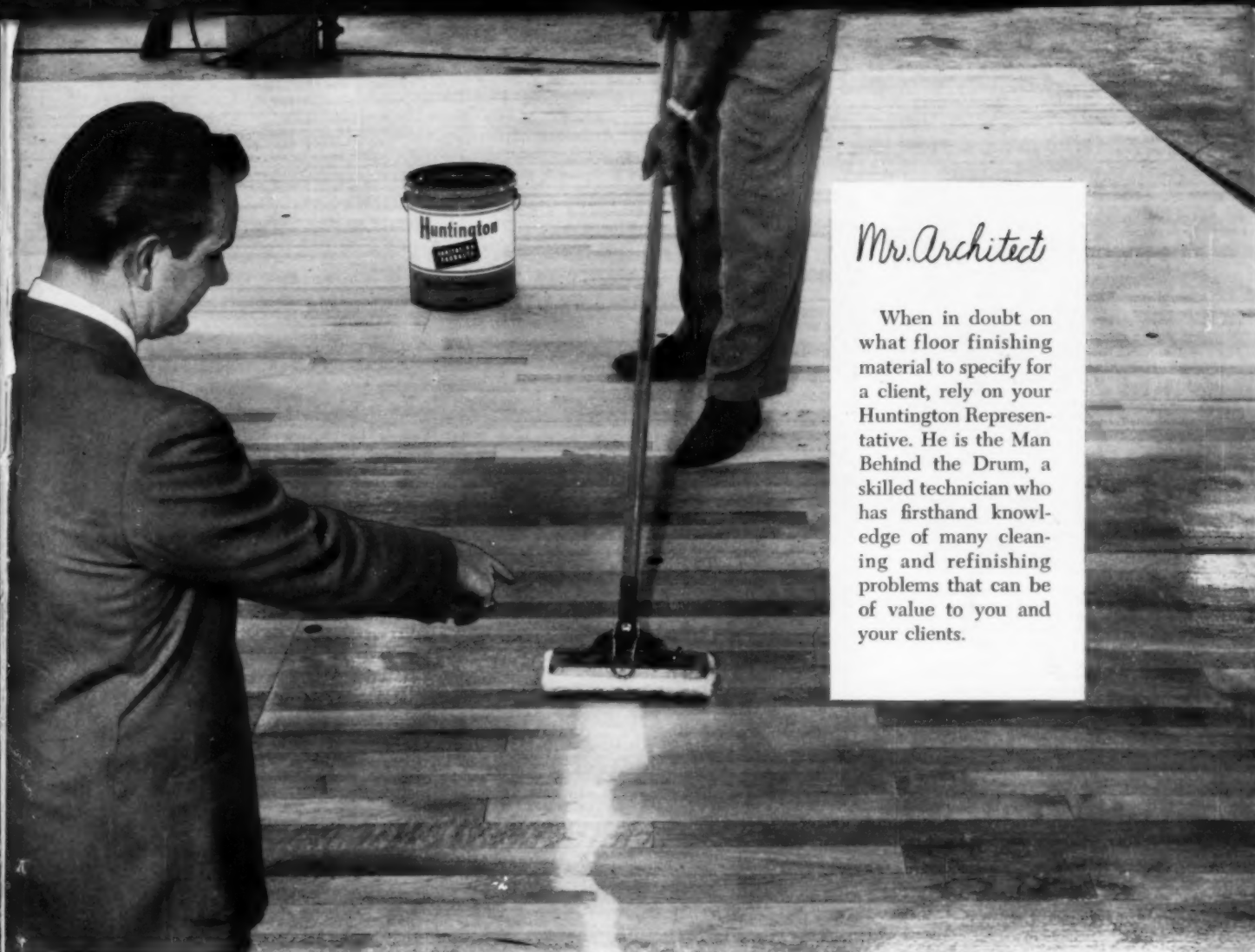
Source: F. W. Dodge Corporation

HOSPITAL BUILDINGS

Construction Contracts—Regional Comparison

Valuation (in \$ thousands)

Region	4 mos. 1957	4 mos. 1956	% change
I (Boston District)	6,239	7,249	-14
II (Buffalo, N. Y. C., Phila.)	71,683	42,700	+68
III (Atlanta, Birmingham)	25,680	14,728	+74
IV (Cintl., Cleve., Pittsburgh)	32,352	16,625	+95
V (Chi., Detroit, Mpls.)	41,366	22,436	+84
VI (N. Orleans, St. Louis)	12,294	15,549	-21
VII (Dallas, Kansas City)	28,727	16,068	+79
VIII (11 Western states)	29,898	23,203	+29
43 states total	248,239	158,558	+57



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This Man Knows how to properly finish wood floors

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Every Huntington Representative has this skill, because Huntington products service more than 25,000 floors daily. And from this accumulated knowledge of cleaning and refinishing problems comes the skill and experience that practically guarantees the finest results possible at all times.

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natural slate chalkboards



Union Terrace Elementary School - Allentown

Arch.: A. L. Wiesenberger, Assoc., Allentown



"First and Only Choice of the Allentown, Pa. School District"

... says Mr. Paul J. Fink, Assistant to the Superintendent of Schools



Midway Manor Elementary School - Allentown
Arch.: Heyl-Bond-Miller, Allentown



Muhlenberg Elementary School Addition - Allentown
Arch.: Lange & Everett, Allentown



South Mountain Junior High School - Allentown
Arch.: Heyl-Bond-Miller, Allentown



Vocational Annex to Senior High School - Allentown
Arch.: George E. Yundt, Allentown

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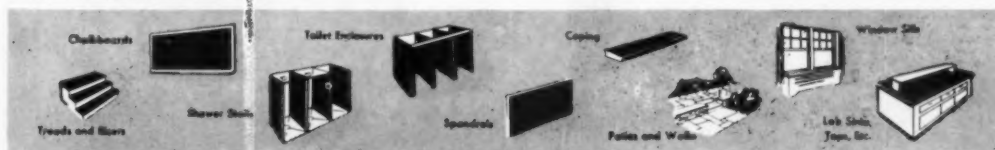
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NATURAL SLATE BLACKBOARD CO.

THE STRUCTURAL SLATE CO. - pen argyl, pennsylvania

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natural slate...500 million years in the making



this shining tower



is fire-protected

by **Permalite**
insulating concrete

Behind the gleaming aluminum face of the 20-story tower of the Bank of the Southwest Building, in Houston, Texas, is a curtain wall of light weight insulating concrete made with Permalite expanded perlite aggregate. The diagram shows clearly how architect Kenneth Franzheim designed this wall to gain a full 4-hour fire rating. Portland cement and Permalite, in a 1-to-4 mix with an air-entraining agent, were machine applied. The architect's office states that the finished wall proved to be very hard, dense and structurally sound.

IN ACTUAL FIRE TESTS of 4" perlite insulating concrete walls, such as this one, the temperature of the unexposed face averaged only 159°F. at the end of 4 hours. A further advantage is found in the fact that Permalite insulating concrete has only limited expansion at high temperatures and does not tend to bulge or spall off as do concrete and plaster made with heavy, unexpanded aggregates.

MORE AND MORE, architects are designing for light weight insulating concrete curtain walls, since the many Permalite curtain wall jobs now standing have proved that Permalite insulating concrete provides adequate strength and fire protection, as well as additional acoustic and thermal insulation values.

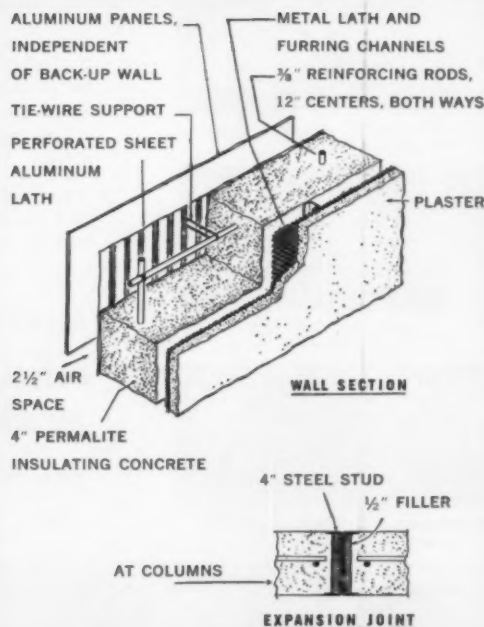
write for information PERLITE DEPARTMENT
GREAT LAKES CARBON CORPORATION
612 south flower street, los angeles, california

ARCHITECT:
Kenneth Franzheim, Houston, Texas.

GENERAL CONTRACTOR:
W. S. Bellows Construction Co., Houston, Texas.

CURTAIN WALL HUNG BY:
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PERMALITE SUPPLIED BY:
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Textolite® Ideas

FOR YOUR
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Reception hall, Appliance Park, Ky., random-planked in Textolite laminated surfacing.

General Electric announces new Textolite® random-plank effect...looks like wood...lasts years longer!

Economical, distinctive in design, General Electric's modern random-planked surfacing can be installed in two easy ways.

It's almost indistinguishable in appearance from real wood. It resists scuffs, scratches, stains . . . stands up under daily wear . . . will not darken with age. It's new Textolite random-plank wall surfacing.

Here are two easy ways to install it: (1) Textolite is cut to desired widths (usually 4, 6, 8, or 10 inches); and separate pieces are bonded to plywood or other wall

surfacing. (2) Full-sized sheets, already bonded, are grooved with a grooving saw to produce any effect desired. It's that easy!

Random planking with Textolite is perfect for either home or commercial use. Authentic wood-grain patterns include birch, walnut, mahogany, oak, and cherry. They clean with the whisk of a cloth.

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When completed this fall, this masterpiece of planning will have specially designed luminous acoustical ceilings which will transmit highly efficient light during the day and also act as barriers to sound. A separate ceiling light circuit will cause the building to be aglow from top to bottom during the night. In all details this soaring structure demonstrates many forward steps in planning coupled with steadfast adherence to time-tested quality standards. Little wonder, then, that all Flush Valves in it bear the name SLOAN—leader for 50 years.

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and PHILIP JOHNSON
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